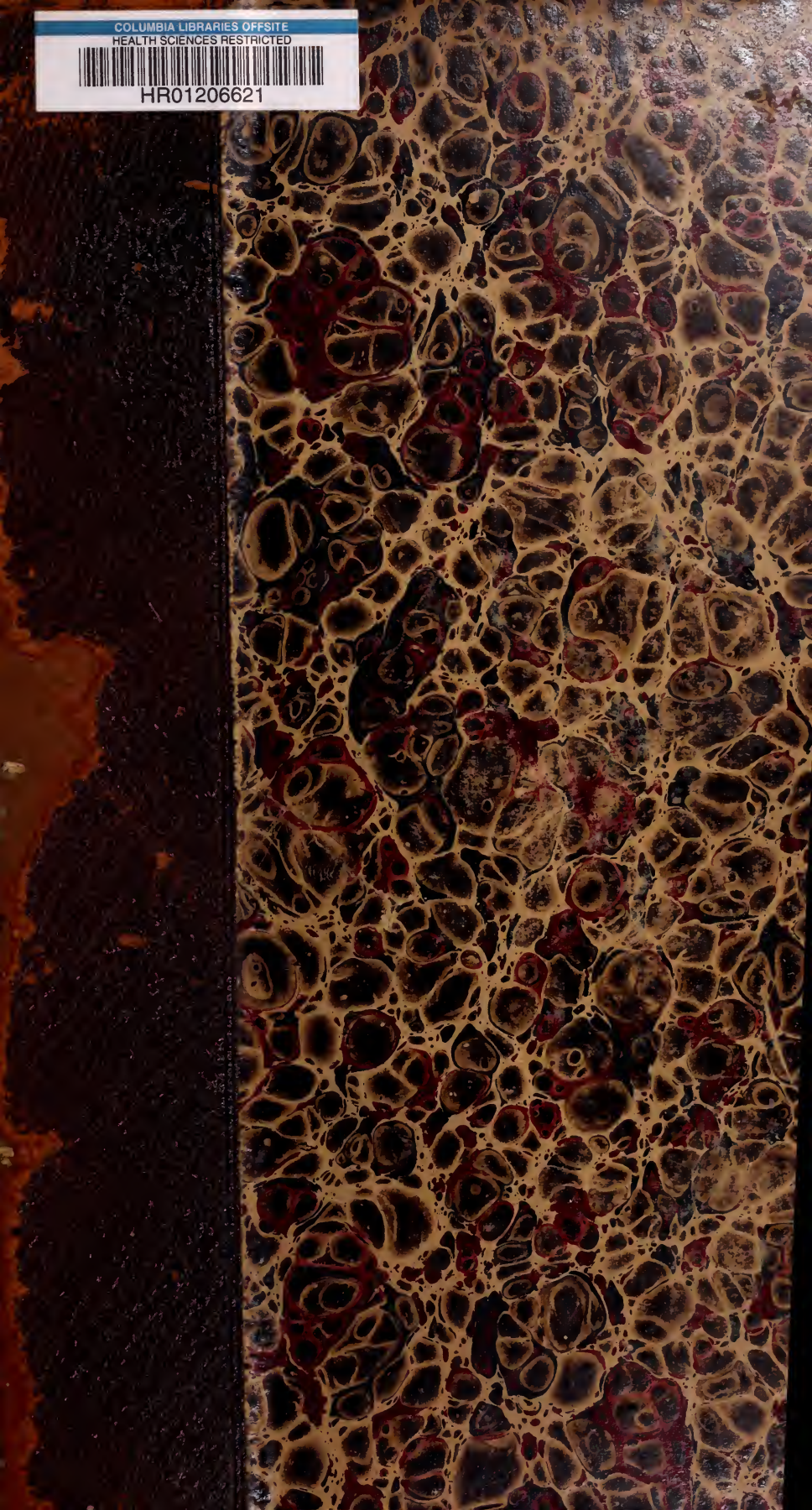
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EDITORIAL ANNOUNCEMENT FOR 1903.

TO THE writer of this inaugural editorial of the JOURNAL under its new administration has been granted the exceptional privilege of taking an active part in the progress of dermatology in the United States since its establishment as an exclusive field of practice in the hands of accomplished specialists, and its recognition as an important department by medical schools, hospitals, and the profession at large. During this period, approaching a half century, the advance which has been made in the character of American dermatological literature can hardly be appreciated by those who are not familiar with its early history. In a "Review of Modern Dermatology," published in 1876,* the writer remarked: "And what have we at home done during the same period? Dermatology has hardly yet found a place amongst us as an acknowledged specialty. Only in a few of the largest schools, and within the last few years, is it taught by those particularly devoted to its study, and still more recent is the establishment of departments for the treatment of skin diseases in connection with any of our great dispensaries and hospitals. Can we wonder, then, that America has as yet contributed little to dermatology, if our views concerning the qualifications for authorship in this branch of medicine, expressed in the beginning, are correct? We have no recent work to take its place amongst others at the head of our article as a representative of an American school. We have no book on general cutaneous medicine which is the work of a large observer, no monographs containing the researches of skilled and specially trained workers. We trust, however, before long to be able to welcome the beginning of a national literature of the right kind. Many young men have come into our large cities during the last few years, trained by study and observation under the best instructors in this department in other countries, eager for work, who, if faithful to the methods of study acquired there, and to the spirit

*Amer. Journ. of Med. Sciences, April, 1871.

of their teachers, will, as opportunity and experience are afforded them, bring forth independent and reliable results worthy of their masters and honorable to our country. But observation and work must precede, and we cannot look for a national literature or school of dermatology until our dermatologists are made."

How nobly has this prediction been fulfilled. We have several complete and exhaustive treatises of high rank, many smaller and excellent manuals, admirable monographs of more limited scope published separately or as parts of cyclopedic works, innumerable original papers founded on clinical observation, unsurpassed reports on pathology based on laboratory research, and praiseworthy atlases. Many of these contributions to our literature have appeared in the pages of this journal since its foundation in 1882, and in its immediate predecessors, the *American Journal of Dermatology and Syphilis* and the *Archives of Dermatology*.

But in addition to such contributions the JOURNAL has made itself the channel of publication of literature in no way related to dermatology, namely, that of genito-urinary affections. This is an association not without precedent, but neither natural nor desirable. Either specialty is extensive enough to demand a distinct periodical organ. No first-class treatise on dermatology contains any reference to diseases of the genito-urinary system, nor is there any reason why a journal of diseases of the skin should do so. The syphilo-dermata belong to dermatology and have no relations with genito-urinary surgery, and syphilis should be regarded as truly a dermatosis as leprosy or tuberculosis cutis. In fact syphilis is in no way essentially a venereal affection, for although generally inoculated through genital contact, its extra-genital sources of infection are constantly in operation, and may be said to be its most dangerous ones. It goes without saying, therefore, that syphilis will receive its due and highly important consideration in this journal.

But although the scope of the JOURNAL is to be narrowed in the future by dissolving its recent association with genito-urinary medicine, it should be none the less valuable on this account. There are few physicians or surgeons, even in the largest cities, where skilled dermatologists are to be found, who do not treat at least all the ordinary affections of the skin, and over our broad country, outside such centers of population, the care of such diseases is wholly in the hands of the family practitioner. It is essential, therefore, that he should keep himself fully acquainted with the latest advances in this field of medicine. No book on cutaneous diseases,

however complete at its publication, can long represent the latest knowledge regarding them, so rapidly does this accumulate, as the result of the incessant labors of clinical observers and laboratory research. It is the intention of the management to present to this larger class of readers and practitioners exhaustive epitomes of a practical character, which shall exhibit the progress of dermatology in all parts of the world. In its pages will constantly appear original papers by the leading practitioners and teachers of dermatology of this continent. It is to be the official channel of publication of the transactions of the American Dermatological Association and of the reports of the several dermatological societies and clubs in the various cities, which should ensure the preservation of the rarest and most interesting cases of disease which occur in this country. In our pages will also appear the results of the researches of skilled workers in our school and hospital laboratories in relation to bacteriology and pathological anatomy of skin diseases. It is our purpose, moreover, to enhance the value of all communications as fully as means permit by colored and photographic illustrations. Such a journal, representing the opinions of the most eminent dermatologists in all parts of North America should commend itself to and receive the support of the profession at large.

It is especially desirable that it shall reflect the peculiarities and prevalence of skin diseases as they occur in all parts of this hemisphere under its marked variations of climate and diverse nationalities. Even in North America conditions of life and populations are changing rapidly, and it is important that data relating to them should be collected without delay. Our Indians and Alaskans are vanishing, and reports from resident physicians and army surgeons upon peculiarities of cutaneous affections among them would be very valuable. The contrast between the skin diseases of Mexico and Canada, those of our dry and lofty interior regions and those of the Atlantic and Pacific coasts, is a very interesting study, and so are the differences in prevalence and characteristics of these affections in our widely diverse immigrant and indigenous peoples. Upon all these questions we invite observations and correspondence. We would especially welcome communications concerning the existence of imported and undescribed dermatoses, particularly those of contagious character.

It is to be hoped that the foreign circulation of the JOURNAL may be enlarged. There has existed, unfortunately, a notable lack of appreciation or knowledge of the work of our American derma-

tologists on the part of their European colleagues, as shown in their failure to recognize in their writings and discussions much that has already been accomplished here in connection with subjects under consideration. This is partly due without doubt to their failure to acquaint themselves with our literature and researches; less, let us hope, to disregard for cis-Atlantic medicine. A careful reading of some of our recent admirable treatises, with their exhaustive references to the work of American dermatologists, would reveal to many of our foreign brethren an unknown treasury of knowledge. This observation applies far less generally, we are pleased to believe, to Great Britain than to Continental countries. Medicine is to advance to its highest development by the united labors of all nations, and any school is sadly narrowed which ignores the work of others.

J. C. W.

DERMATITIS COCCIDIOIDES.

By Douglass W. Montgomery, M.D., H. A. L. Ryfkogel, M.D., and Howard Morrow, M.D.

(Read at the 26th Annual Meeting of the American Dermatological Association, 1902.)

PRELIMINARY REMARKS.

THE patient, of whom the following is a history, was first seen by Dr. D. W. Montgomery in the winter of 1900 in the practice of Dr. T. C. Ford. Although Dr. Montgomery had previously seen three patients afflicted with the same disease, the condition then was not recognized. This will serve to indicate how widely clinical appearances vary in different cases. Dr. Montgomery again saw the patient one year later, in January, 1901. Little change had taken place, and for further investigation a nodule was removed from the back of the hand and examined. Capsulated organisms were found, and although few, there were enough for a positive diagnosis. After these preliminary remarks we will proceed with the history of the case.

HISTORY OF THE CASE.

Antonia Bonetti came definitely under observation for the disease which is the subject of this paper, January 22, 1901. He was then fifty-four years of age. He was a native of Switzerland, and arrived in San Francisco in 1852, at seven years of age. During the following ten years he worked on ranches in San Luis Obispo County and as a miner in Virginia City, Nev. Then he returned to San Francisco, where he resided until his death. He never lived in the San Joaquin Valley, a locality where three of the former patients seem to have acquired the disease. In 1875, at thirty years of age, he married, and his wife died in child-birth in 1892, leaving five healthy children, two of whom died of infantile troubles, leaving three who are still living. The two eldest, boys, lived with their father in lodgings up to within a few weeks of his death, but showed no signs of the disease. The patient was not tuberculous, never had contracted lues, and first noticed his trouble as a gradual enlargement of the left hand and forearm seven years before coming under

our observation. These continued to increase in size, and the following year the left leg and ankle began to enlarge. Four years thereafter an eruption appeared on the chest, the remains of which were still present. In 1900 an eruption had broken out on the left forearm and hand, and six months previous to the diagnosis being made a similar eruption had appeared on his neck and ears.

Up to this point it will be seen that the progress of the disease was very slow, years intervening between the appearance of the disease in new localities. After he came under our observation the same slowness of invasion was noticeable, for between the very first observation until the making of the diagnosis in January, 1901, a whole year elapsed without any observable progress.

DESCRIPTION OF THE LESIONS.

On August 21, 1901, there was hypertrophy of the skin and subcutaneous tissue of the left forearm, hand, both legs and left foot. The bones were apparently not enlarged, except where there was a separation of the lower end of the left radius from the shaft. This lesion of the wrist joint caused some pain. There was no history of traumatism, and the patient was unable to tell, at time the history was taken, when the lesion had begun. Over the chest and abdomen there was an irregular pigmentation, the remains of a former papular eruption. This pigmentation was brown, the spots were about the size of a pea, and were angular in shape, with shiny centers, and were strikingly similar to the pigmented spots resulting from lichen planus. The central portion of this eruption was a large brown patch, due to a confluence of smaller lesions. On the left forearm and on back of the left hand there was an eruption of papules, pustules, and nodules, all discrete, but very thickly placed. Many of the old pustules were covered with crusts. According to the patient this eruption and that over the chest were in their inception similar. There was a pustular folliculitis of the neck, so dense on the right side as to form a boggy mass. The right ear was double the normal size, tense, red and shiny, and resembled an acute eczema. There was a superficial elephantiasis of the left leg and foot, and the skin was covered with a papillary overgrowth with a thickened horny layer. There was no active inflammation in this leg, and very little discomfort. His general health was good, and he continued his occupation of bread-making.

BLOOD EXAMINATION.

The blood was normal excepting for leucocytosis and eosinophilia.

The microscopic appearance of the cells was practically normal.

Sept. 16, '01—Red cells	4,615,000	per c. m. m.
White cells	15,100	"
Hæmoglobin	75	per cent.

Differential count—

Lymphocytes	1,298= 8	per cent.
Large mononuclears	2,627=17 2-5	"
Polymorphonuclear neutrophiles	8,667=57 2-5	"
Polymorphonuclear eosinophiles	2,597=17 1-5	"
Myelocytes and basophiles	none seen.	
Nucleated reds	"	
Sept. 28, '01—Red cells not counted.		
White cells	11,600	per c. m. m.

Differential count—

Lymphocytes	953	
Large mononuclears	1,856=16	per cent.
Polymorphonuclear neutrophiles	6,449=55 3-5	"
Polymorphonuclear eosinophiles	2,343=20 1-5	"

Myelocytes basophiles and nucleated, red not seen.

Microscopic appearance normal.

TREATMENT.

At first the patient was repeatedly treated for syphilis without any improvement. Then increasing doses of iodide of potassium were given for a long time without any change in the disease. Then all the usual parasiticide ointments were used without benefit.

From August 30, 1901, to November 1, 1901, we treated the forearm with exposures to X-rays. The X-ray sittings were given three times a week, and in the course of two months all pustules had dried up, the nodules had become flatter, and the color of the lesions had grown darker, resembling the pigmented areas on the chest. During the month of October, 1901, the pustules on the neck were similarly treated, with the result that large crusts formed, but before these lesions could be entirely cured the patient was obliged to enter the hospital on account of the progress of the internal infection.

On December 15, 1901, the patient was weak, had anorexia,

severe pain in the temporal regions, fever at night and rapid respirations, but there was no change in the skin condition, except the formation of new circinate areas with infiltrated and scaly borders on the sides of the neck, which resembled a circinate syphilide.

On January 5, 1902, all the lesions on the chest had broken down into superficial ulcerations, without any discharge. The lesions on the neck and forearm were markedly pustular, and the odor was nauseatingly offensive.

The patient became dyspnœic, feverish, and very weak, and on January 8, 1902, one year after the diagnosis was made, he died.

POST MORTEM EXAMINATION.

The body was poorly nourished. The heart, liver, spleen, testes, and lymphatic nodules were unaffected. Except for cloudy swelling the kidneys were also unaffected. The suprarenal capsules were much enlarged, measuring 7 x 5 x 2 c. m. The tissue proper was almost entirely displaced by a friable but fairly dense yellowish white tissue. The left lung was infiltrated throughout its entirety with bodies like miliary tubercles more or less densely placed. The upper lobe of the right lung was also studded with similar tubercles. All the lung tissue was buoyant. Microscopically the tubercle like bodies in the lungs and suprarenal capsules consisted of granulomatous tissue containing numerous giant cells and capsulated bodies. Many of the capsulated bodies were included in giant cells. In the lungs there were extensive areas of broncho-pneumonia.

EXPERIMENTAL INOCULATIONS.

The first attempts at cultures were unsuccessful. Later, October 23, 1901, after sterilizing the skin a nodule was removed, and macerated in sterile salt solution. Cultures were then made, and all grew fungus. On November 8th a male guinea-pig was inoculated intraperitoneally with a culture, and took the disease in the manner to be described later. Usually when inoculated subcutaneously guinea-pigs did not take the disease.

HISTOLOGY OF THE SKIN.

Histologically the condition was a diffuse granuloma. The horny layer was thickened in some places, while in others it was absent.

There was a slight hyperplasia of the rete, with short processes passing down into the corium. A few leucocytes were found between

the epithelial cells, and organisms were seldom found in the rete. Abscesses in the epithelium, so characteristic in blastomycosis, were very rarely present.

The corium had a diffuse cellular infiltration extending to the subcutaneous tissue. Besides the infiltrated areas around the vessels and appendages of the skin there were other scattered areas of infiltration in the corium. The vessels were dilated. In the infiltration the elastin had been destroyed. Fibrous bundles remained, except in the denser infiltration. Giant cells were occasionally found, but were not so numerous as in the previous cases of *coccidioides*. The infiltration consisted of plasma cells, mast cells, giant cells and leucocytes. The leucocytes were mostly polynuclear.

The infiltration in this unusually chronic case did not go on to abscess formation, and in many instances groups of the organism were found surrounded by an old cicatricial tissue as dense as in cirrhosis of the liver, with each organism in a separate loculus. These groups were of various sizes and contained organisms in all stages of development.

DESCRIPTION OF THE ORGANISM.

The organism found in this disease has a double cycle of growth. One in the tissues, and the other as seen on culture media. And these two cycles have no features in common, and this constitutes a marked difference between this organism and the blastomycetes. In the tissue the organism takes the form of a sphere between 3 1-2 μ and 5 μ. This sphere is surrounded by a clear capsule having a double contour, and its outer wall is covered with spines, which are only seen in the fresh specimens. The smaller capsules have clear or granular contents, the larger capsules are filled with endogenous spores. Some of the larger capsules have a clump of large granules in their center, and frequently their capsules rupture, setting free these granules or spores. The spores are circular, clearly defined and highly refractive, and every stage from this spore to the adult body can be traced. No micropyle has ever been found in the capsule, as in the coccidia. No budding or mycelial forms have ever been discovered in the tissues. Frequently when stained with carbol-fuchsin the capsules resist decolorization with acid. Besides the absence of budding forms the most noticeable difference between this fungus and blastomyces is the much larger size of the bodies, and their greater number in the tissues.

In a hanging drop of bouillon or agar inoculated with the pus,

two or three mycelial threads will be seen to spring from a medium sized capsule. It is a curious fact that these threads will not grow from either a large or small capsule. These mycelia rapidly branch and henceforth their life cycle is of the extra-corporeal type.

The extra-corporeal growth is that of a mould fungus. In bouillon it appears like a fluffy thistledown. On the solid media it is at first white and shiny, and if the media be dry, it sends off aërial hyphæ, forming a fluffy growth particularly well seen on potato and carrot. It grows readily on all the ordinary media, and liquefies gelatine slowly. It does not grow anærobically, and does not form gas on any of the sugars. In the cultures no coccidia-like bodies were found, and as in the tissues, no budding forms have been observed.

EXPERIMENTAL INOCULATIONS.

One to two weeks after intraperitoneal inoculation guinea-pigs would show swollen, indurated and at times reddened scrota, which sometimes ruptured and discharged a thick caseous pus. Frequently a sinus developed at the point of injection. A considerable dose of the culture was required to get positive results, but when symptoms developed, the disease was invariably fatal. Numbers of scattered nodules were found in the peritoneal wall. Besides these lesions other organs, such as the liver, kidneys, and lungs, showed scattered nodules, but with no constancy. Frequently there was a general adenopathy, in which the lymphatic nodules broke down into caseous pus. The pigs emaciated rapidly and died between the third and eighth week. They showed neither febrile reaction nor leucocytosis. Wherever there was any pus formation great numbers of the organism could be found.

DESCRIPTION OF PLATES.—Article of Drs. D. W. Montgomery, Ryfokogel and Morrow.

FIG. 1. Section of skin showing organisms in the derma. In the tissues the organism takes the form of a sphere between $3\frac{1}{2}\mu$ and 5μ. This sphere is surrounded by a clear capsule having a double contour. The smaller capsule having granular contents, the larger capsule is filled with endogenous spores.

FIG. 2. Mycelial threads as found in a hanging drop of bouillon. These threads spring from the medium sized capsules, and do not grow from the larger or smaller capsules.

PLATE I.—To Illustrate Dr. D. W. Montgomery's Article.

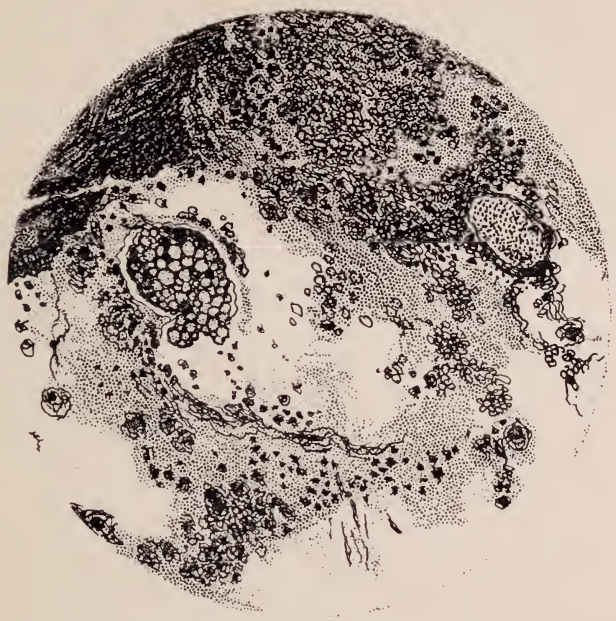


Fig. 1.

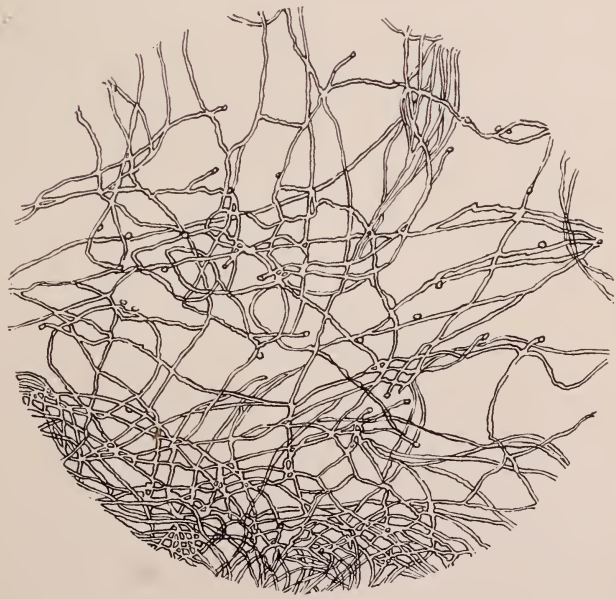


Fig. 2.

REPORT OF A CASE OF FAVUS OF SCROTUM, CO-EXISTING WITH RINGWORM OF THE THIGH, GIVING INDENTICAL TRICHOPHYTON-LIKE CULTURES.

By A. D. Mewborn, M.D.

New York.

(from pediatrics laboratory, N. Y.)

In 1896, Bodin[1] gave a very interesting description of two cases of ringworm in calves which, clinically and microscopically, were due to a large spored trichophyton (endo-ectothrix), but which (in cultures on glucose-agar), instead of the downy-like, crateriform or button-form of the trichophyta, gave an irregular, elevated, greyish, humid or cerebriform growth.

These cultures grew best at a temperature of 30 to 33 degrees C., in media rich in peptones (5 per cent.) but poor in hydrocarbons. They rapidly liquefied gelatine, and did not produce spores in grape form (Botrytis). All of these characteristics would undoubtedly fix it in the achorion or favus group. Bodin called the disease "*favus à lésions trichophytoïdes.*"

Sabouraud[2] observed the same facts in man and animal (especially the calf), and described the lesions as "vesicular or pustular circles, sometimes a veritable *kerion Celsi*, with intense follicular suppuration." In all of these cases the microscopical examination showed a "mycelium with spores in chains," and a culture of slow growth, humid and cerebriform. Sabouraud was inclined at first to agree with Bodin that it was "favus à lésions trichophytoïdes," but at present he maintains the opinion that it is a special class of trichophyta with *faviform cultures.* In fact, the higher or perfect form of all these *Hyphomycetes* (Microsporon, Trichophyton, and Achorion) has not yet been found, hence it is impossible to definitely classify them.

Much light has been thrown on the question of classification by Bodin[3] in his communications on the "*Microsporum du cheval,*" and especially on its pleomorphism. He describes three distinct forms of growth, under different conditions of temperature and aëration, which he obtained from ringworm of the horse.

1. *Endoconidium.*—This was obtained by cultures direct from the animal, and gave on beer-wort agar a reddish yellow, glabrous, plicated colony. When this culture was inoculated under the skin of a horse it produced a typical ringworm.

2. *Acladium.*—This was obtained by keeping the endoconidium cultures at a constant temperature of 33 degrees C. on a medium rich in nitrogenous material. In a few weeks a thick, silky down spread over the entire growth. This form has the peculiarity of remaining fixed in type after repeated transfers to different media, and must be inoculated into an animal to bring it back to the endoconidial form. When so inoculated it produced a typical ringworm.

3. *Oospora.*—This was obtained by keeping the *acladium* growth at a temperature below 25 C., well aërated, subject to the daily changes of night and day, with a slow drying out of the media and there developed small, rounded, plaster-like deposits on the *acladium* growth. These deposits spread in circles and became confluent. This form once fixed remained permanent and it has been found impossible to bring it back to either of the other two forms. Microscopically, this oospora form is closely allied to the fungi of actinomycosis, Madura foot, "*Farcin du boeuf*" of Nocard, pseudotuberculosis of Eppinger, and becomes one of the best characterized of the streptothrix group. It grows in long, undulating, ramified filaments, which reproduce by spores forming at the ends of the terminal filaments, forming chains identical in appearance with the streptococcus. As these chains separate very easily from the parent filament, their presence might be taken for a contamination, but in the hanging drop their method of formation can be observed. The terminal filaments thicken and segment into rectangular uniform divisions about .8μ in diameter, these segments become rounded into a perfect copy of the streptococcus. When this oospora is inoculated into the horse it produces an alopecia, but entirely different from the original circinate pustulo-vesicular ringworm from which it was derived.

Calvé and Malherbe[4] found this oospora in this special form of alopecia among some army horses and described it fully as the casual agent under the name of "*trichophyton minimum.*" Bodin at once recognized it as identical with his oospora described above.

So it is fairly well established that two distinct diseases of the horse may be caused by the same microsporon, having three types of pleomorphic growth.

When we recall the fact that the achorion vegetates along the oospora type, and that the *microspora* are as nearly allied as possible to the *trichophyta*, and that the *trichophyta* are related to the achorion groups by the forms already described as "*favus à lésions trichophytoïdes,*" one arrives at the conclusion that all these dermato-

phytes are of the same family and cannot be separated as fixedly as has been done.

In speaking of the pleomorphism of favus, Truffi[5] brings some light on the subject by the experiments which he performed of inoculating the downy growth from an old favus culture, which had undergone pleomorphic degeneration, on a medium rich in hydrocarbons and obtained a downy white growth with a central button. From this growth he obtained by inoculating his arm a typical favus cup. From this favus cup he made cultures and instead of obtaining a reversion to the typical favus growth, he obtained a downy white trichophyton growth. Finally, Sabouraud[6] describes a typical case of favus in a mouse, with numerous favus cups, which gave in direct cultures a heavy, downy, trichophyton growth.

Sifting down all these facts, we must admit with Sabouraud that favus cannot be characterized clinically as a disease invariably associated with a crust formation in the shape of favus cup, since there are favus cases without cups, but characterized by a pityriasic, impetiginous aspect, with well marked folliculitis (Besnier, Brocq.). Neither can the description of the culture as "*spongeoid*" be considered as typical, since favus cultivated hereditarily from pleomorphic variations loses this spongeoid form and takes on the downy form. Even the spore formation in grapes cannot be considered distinctive, since the "*pectinated*" forms, described by Sabouraud, can be considered as modifications of the grape form.

To still further lower the barriers between the achorion and the trichophyton I wish to report the following case with cultural experiments.

Case. 1. W. W., aged twenty years, a well nourished mulatto waiter, applied for treatment at the New York Hospital, out-patient department, Aug. 4, 1901.

Through the courtesy of Dr. P. A. Morrow, I am permitted to report the case.

Clinical History. The patient denies syphilis, but has at present a gleety discharge from a gonorrhœa contracted about a year ago. The disease for which he seeks treatment began about a month ago with the appearance of a red scaly patch on the inner side of the left thigh, limited to the area in contact with the scrotum. This patch enlarged and spread out on the anterior surface of the thigh, while similar patches appeared in the right inguinal region, on the abdomen, buttocks and in both axillæ. Simultaneously with the appearance of these patches he noticed a crop of about a dozen

small yellow "cuplike" crusts on the scrotum at the base of the penis. Some of these crusts were removed, but they soon reformed. There was considerable itching and burning in the patch on the thigh. The patch in the right inguinal region was uncomfortable only from the pressure of a truss-pad, which he wore for a right inguinal hernia. The scrotal region gave him no annoyance.

Description. On the inner and anterior aspect of the left thigh (genito-crural region), covering an area as large as the palm of the hand, was a dark red, scaly patch, with an elevated, sharply defined, papulo-vesicular border. This border, formed by the junction of a number of arcs, gave rather a geographical design which was accentuated by scraping with a glass slide to obtain a specimen for the microscope. After scraping the desquamating epithelium away, the central portion was left a shiny red with scattered papulo-squamous "islands." The so-called "*cocarde*" appearance.

The other patches were simply scaly and red with irregular and sharply defined borders. On the anterior surface of the scrotum at the peno-scrotal junction was a chain of *typical favus cups*, eleven in all, in three groups, one of which was along the scrotal raphé. These favus scutula were of a bright yellow color, softer than those usually found on the scalp, but quite friable, varying in size from that of a large pin-head to that of a split pea, concave on the surface and imbedded in the epidermis. When these cups were removed there was left a raw, bleeding surface. There were no favus cups in the scalp or on the rest of the body.

Slides were prepared from the favus cups and from the ringworm patches in the following manner. A few drops of glacial acetic acid was added to the epidermic scales which were taken from the different patches. These scales were rubbed between two slides until evenly spread. The slide was allowed to dry in the air then passed through the flame to fix. Absolute alcohol and ether were then added to remove excess of acid and fat, then stained from one to three minutes in Goldhorn's polychrome methylene blue.* The preparation was cleared in absolute alcohol and xylol and mounted in balsam. When examined under the microscope (with a Zeiss DD. objective) the horny epithelial cells were stained a pale blue with a greenish tinge, while the mycelium and spores were

*Note.—Goldhorn's polychrome methylene blue, prepared by digesting polychrome methylene blue with lithium carbonate and added acetic acid to neutralise, is an excellent stain for epidermic scales suspected of containing skin fungi. The horny cells do not over-stain and thus obscure the field. M.

stained a dark violet. Some of the mycelial segments were long and slender while others were thick and cuboidal. There were numerous endogenous spores (Fig. 1). The favus cups when prepared in the same manner and examined, presented an entirely different picture. The mycelium formed irregular, dichotomized, interlocked and clubbed segments with numerous round and oval spores, corresponding to the types found in favus of the scalp. (Fig. 2). These degenerated forms were only found in the favus cups, all the other patches gave the trichophyton form.

Cultures were made from the favus cups and from the different patches on glucose-agar (glucose, 4 per cent.; peptone, 1 per cent.; agar, 1.50 per cent.), and kept at the ordinary room temperature. A pure culture was obtained direct from the favus cups in each of six inoculations. The inoculations from the ringworm scales were contaminated with staphylococci and had to be transplanted several times by the streak method to obtain pure cultures. At the end of a week the downy-white tuft of trichophyton-like growth obtained from the favus cup was indistinguishable from that obtained from the ringworm patch. In Ehrlenmeyer flasks at the end of three weeks' growth on the same media as above, the growth from the patches was more vigorous and formed distinct *crater-like* depressions with radial folds. The circumference formed a raised sharply defined circular border. (Fig. 3.) The growth from the favus cup was entirely different from the waxy or *cerebriform* growth considered as typical of favus, but resembled more the acuminate or *button* form of the trichophyton endothrix. The growth was circular with a rounded central elevation capped in the center by a round button. The margin was slightly irregular and showed an early tendency to the development of a downy pleomorphism (Acladium). (Fig. 4.)

On beer-wort agar at the end of six weeks' growth the ringworm culture presented a very convoluted central portion and a *fern-leaf* edge. (Fig. 5.) For the purpose of better illustrating the differences between these cultures and the typical favus cultures, two favus cultures on beer-wort agar are shown. (Fig. 6 and Fig. 7.) These cultures were made from a typical favus cup of the scalp and in Fig. 6 the growth is shown at the end of three weeks. The growth was then of a waxy yellow color, humid, convoluted and without any downy covering. In Fig. 7 a culture is shown at the end of three months' growth. In this culture taken from the same scalp, the color was dark brown with clearly marked *cerebriform*

convolutions. The *fern-like* fringe around the circumference is not surface growth, but submerged root fibres.

Cultures made in the hanging drop of glucose-bouillon (2 per cent.) according to the manner described by Sabouraud gave at the end of from five to eight days interesting means of comparison between the reproduction forms. The drop-cultures from the favus cup and from the ringworm had the same form of reproduction by large fusiform multilocular "spindles" or chlamydospores. These chlamydospores varied in size, averaging 10μ x 40μ, and having from three to six deeply staining granular segments. Some of these "spindles" were provided with slender terminal filaments or "whips." The cell wall did not take the stain.

In some of the drop-cultures from both sources there were in addition to the chlamydospores numerous slender hyphæ bearing sessile or "grape-like" spores. These spores seemed attached directly to the stem in the favus culture, while the spores in the ringworm culture were attached by means of sterigmata. These spores or *gonidia* were about 2μ to 4μ in long diameter, oval in shape and very easily detached. (Fig. 8 and Fig. 9.) The general outlines of one of these drop-cultures may be seen in Fig. 10.

Inoculation Experiments. Two inoculations from the favus cultures were made on the author's left forearm at intervals of three weeks, but with negative results. Three ordinary house mice were next selected for experiment on account of Sabouraud's success in obtaining downy growth from favus of mice. These were inoculated with the favus culture with negative results. January 31, '02, successful inoculations were obtained from the *ringworm* cultures of the thigh. A rabbit, weighing a little over five pounds, was inoculated on the back in the following manner; an area of two square inches was shaved, cleaned with ether and well scarified as if for a vaccination, the culture from glucose-agar was well rubbed in on the point of a sterilized scalpel. At the end of one week (Feb. 7), a few pin-head sized favus cups had developed. At the end of two weeks (Feb. 15) a large conglomerate favus cup, about three-eighths of an inch in diameter had developed. There were a number of smaller cups scattered over the patch, most of which were perifollicular, being centered by a hair. These cups were oval to circular in form, sulphur yellow in color, dry and friable, concavo-convex and when removed left raw bleeding surfaces. Stained preparations made from the cups showed irregular and dichotomized mycelium as well as short jointed chains, but

there were no epilated hairs found to contain any mycelium in the hair shaft or hair follicle. Unfortunately, while waiting for the further evolution of the lesion, the itching must have induced the rabbit to rub his back against the cage leaving a raw bleeding surface. No more cups formed, but the patch became papulo-vesicular, resembling a true *kerion Celsi*, clearing up entirely at the end of a month. Cultures from the experimental favus cups made on glucose agar gave, at the end of two weeks, typical crater-like trichophyton growths. A guinea-pig was inoculated from this culture but the result was negative.

Résumé and Conclusion. While it would seem unwarranted to draw any conclusions bearing on the question of the identity of the Achorion and the trichophyta from this isolated case, nevertheless it does seem to the author that this case may be regarded as one in which the same trichophyton (a megalosporon ectothrix of probable animal origin) on the same patient, but in different parts of the body, where the conditions of soil were different, produced two clinically distinct diseases—favus and ringworm.

The irregular and interlocked mycelium found in the favus cups were then only degenerated forms due to a lack of the best suited conditions in the soil for its most vigorous development. This conclusion would seem to be in accord with the very elaborate experimental study of the Achorion Schönleinii made by Bukovsky[7] in which he found that "the more indifferent the skin is to the fungi (Achorion), the more likely it is to show the favus cup. The stronger the reaction of the skin against the mycelium, the less the tendency to scutulum building."

Bibliography.

[1]Bodin, *Memoires de la Societe de Biologie*, 1896, p. 711.

[2]Sabouraud, *La pratique dermatologique*. Vol. i, p. 823.

[3]Bodin. Sur le polymorphisme des champignons parasites des teignes et en particulier du Microsporum du cheval. *Comptes rendus, Sect. Derm. et S. XIII. Cong. Int. de Med.* 1900, p. 428.

[4]Calvé and Malherbe. Sur un Trichophyton du cheval à culture lichénoïdes. *Archiv. de Parasitologie*, 1899, p. 218.

[5]Truffi. Recherches sur l'Achorion. *Comptes rendus, Sect. Dermat. et Syph. XII. Cong. Int. de Med.*, 1900, p. 426.

[6]Sabouraud, *loco citato*.

[7]Bukovsky. *Archiv. fur Dermat.* 1900, p. 385.

DESCRIPTION OF PLATES.—Dr. A. D. Mewborn's Article.

FIG. 1. Microscopical preparation from ringworm patch. Thick septated as well as slender and branched mycelium. Endogenous spores. X 800.

FIG. 2. Microscopical preparation from favus of the scrotum. Branched, interlocked, and clubbed mycelium with round and oval spores. X 1000.

FIG. 3. Cultures in Ehrlenmeyer flasks on glucose agar from ringworm patch at the end of three weeks' growth. Crater-like appearance. One half life size.

FIG. 4. Cultures in Ehrlenmeyer flasks on glucose agar from favus-cup at the end of three weeks' growth. Button-like growth. One half life size.

FIG. 5. Culture in Ehrlenmeyer flask on beer-wort agar from ringworm patch at the end of six weeks' growth. Convoluted central portion with *"fern-leaf"* edge.

FIG. 6. Culture in Ehrlenmeyer flask on beer-wort agar from favus of the scalp at the end of three weeks' growth. Growth of a waxy-yellow color, humid, convoluted and without any downy covering. Nearly life size.

FIG. 7. Culture in Ehrlenmeyer flask on beer-wort agar from favus of the scalp at the end of three months' growth. Elevated, humid, dark brown, *"cerebriform"* growth. The *"fern-like"* fringe around the circumference is not surface growth, but submerged root fibers seen by transmitted light. One-third larger than life size.

FIG. 8. Hanging drop cultures in glucose bouillon from ringworm growth. Showing *chlamydospores* as well as *gonidia* attached by sterigmata.

FIG. 9. Hanging drop cultures in glucose bouillon from favus of the scrotum. Showing *chlamydospore* with terminal *"whip."* Both Fig 8 and Fig 9 X 1000.

FIG. 10. General outline of a drop culture. X 500.

PLATE II.—To Illustrate Dr. A. D. Mewborn's Article.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.

PLATE III.—To Illustrate Dr. A. D. Mewborn's Article.



Fig. 6.



Fig. 7.



Fig. 8.



Fig. 10.



Fig. 9.

A CASE OF CUTANEOUS BLASTOMYCOSIS FOLLOWED BY LARYNGEAL AND SYSTEMIC TUBERCULOSIS. DEATH; AUTOPSY.

By Frank Hugh Montgomery, M.D.

Chicago.

(Read at the 26th Annual Meeting of the American Dermatological Association, Boston, September 29th, 1902.)

ASIDE from the complication with tuberculosis, the case here reported differs in no essential from several others previously reported by Dr. Hyde and myself. The patient came to the Dispensary clinic of Rush Medical College, June 27th, 1901. He was first seen by Dr. William A. Quinn, who made a provisional diagnosis of blastomycosis, and brought the man to the main clinic for further study. I am indebted to Dr. Quinn for the privilege of investigating and reporting the case. I am also indebted to Dr. Oliver S. Ormsby for valuable assistance in the histological and bacteriological work, to Dr. O. T. Freer for his care of the patient after he developed tuberculosis of the larynx, and to Dr. E. R. Le Count, of the Pathological Laboratory of Rush Medical College, for performing the autopsy and for a report of his subsequent study of the case.

The patient, W. G., aged thirty, was born in America of American parents. He was a railroad conductor, and his health had always been good until the preceding three months, during which he lost some weight. His family history was negative. He had never suffered from any serious illness, and had had no previous disease of the skin. In 1891 he had several lesions (of which he was unable to give an accurate description) on the penis, which lasted about three months. During this period he took medicine internally and had occasional "sores" in the mouth, which remained usually for a few days only. Close questioning failed to elicit a history of any further symptoms of syphilis, or of any treatment after the above-named period of three months. Careful examination of the man's body failed to reveal any evidences of syphilis, past or present. He had been married three years and had one healthy child. He had lost no children and his wife had not miscarried.

The disease of the skin for which he desired treatment began about July, 1899, as a small pimple at the site of a small, hairy mole. He remembered that he picked the lesion frequently with his finger-nails, and occasionally pulled off the small crust that formed. As the spot slowly increased in size, a few new papules appeared at the periphery and eventually coalesced with the larger area. Portions of the involved skin became at times distinctly ulcerated, while other parts would be more or less completely healed over. The border was usually wart-like but soft.

When he presented himself for examination, June 27th, 1901, the cutaneous disease involved the tragus and parts of the lobule of the ear and an irregularly triangular area in front of and below the ear, each side of the triangle being a little more than three inches in length. The central and upper portions of the affected area were intensely inflamed and in part covered with a superficial slough, the result of six-weeks' treatment with the X-rays. Portions of the border, however, had been protected from the rays and showed the characteristic features of cutaneous blastomycosis. In such places the growth was elevated from an eighth to a quarter of an inch, and covered with verrucous and papilliform projections, between which pus exuded from the soft base beneath. In several places the characteristic bluish-red, smooth, sloping border was present and was studded with fine miliary abscesses, many of which required for their recognition a magnification of from three to four diameters. From these abscesses the usual glairy mucus (from the larger abscesses muco-pus) was obtained, which, under the microscope, showed a large number of characteristic organisms in all stages of development and budding.

The man's general health at this time was good, though he had been losing some weight. His left tonsil and the mucous membrane of the left cheek were acutely inflamed, and there was a general pharyngitis of moderate grade, most marked on the left side. The inflammation of the mouth and throat, he said, was of but a few days' duration and followed the X-ray dermatitis on the outer surface of the cheek.

He was given iodide of potassium and tonics, together with simple local treatment. The pharyngitis disappeared in a few days. During the following two months his general health improved greatly and he gained in weight. The cutaneous lesions became much less elevated, and in small areas were replaced by scar tissue.

On September 7th he appeared with an acute pharyngitis and

laryngitis. Four days later the laryngitis was much better, but he was unable to speak above a whisper, and said that for three nights he had had high fever and night sweats. A careful examination by our associate, Dr. E. L. McEwen, showed the presence of moist râles in the apices of the lungs. His temperature was 99.5, his pulse 100, and his sputum contained tubercle bacilli. For further examination of the larynx, I sent the man to Dr. J. E. Rhodes, who recognized a tubercular ulcer of the larynx, for which he recommended daily local treatment. The patient from this time until his death was treated chiefly in the throat department of the college, and also at his home, by Dr. O. T. Freer.

In scrapings from the laryngeal ulcer which Dr. Freer kindly obtained for me, there were large numbers of tubercle bacilli, and also a few blastomycetes. From the mixed cultures obtained from these same scrapings, Dr. Ormsby and I isolated a mould fungus identical morphologically with that obtained at different times from the minute abscesses of the cutaneous lesions. These findings led us to suspect the presence of systemic blastomycosis together with the tuberculosis which we knew to be present. The man grew worse rapidly and died November 22d, 1901.

Dr. Le Count's report of the autopsy* states that death was due to "aspiration disseminated miliary tuberculosis of both lungs, with ulcerative tuberculosis of both apices, miliary tuberculosis of the kidneys, adrenals, and liver, and ulcerative tuberculosis of the small intestine." Sections from these different organs all showed tubercle bacilli in large numbers. Of three guinea-pigs inoculated by Dr. Le Count with tissue, two died within a week; the third died after six weeks from miliary tuberculosis of the lungs, spleen, and liver.

With the assistance of Dr. Ormsby, I took cultures, examined fresh tissue, and prepared sections from the larynx, lungs, liver, kidneys, intestines, spleen, and adrenals, but found no blastomycetes, though tubercle bacilli were everywhere very abundant except in the spleen. Evidently the blastomycosis was limited to the skin. The source of the few blastomycetes found in the scrapings from the larynx cannot be determined. They may have been carried there accidentally from the lesions on the face.

Histopathology: The cutaneous lesions showed the usual struc-

*Dr. Le Count's full report will be included in that of Dr. Freer's, who will publish a detailed description of the somewhat unusual tubercular condition of the larynx.

ture, details of which have now been given in so many cases that their repetition here is hardly justifiable. The sections showed marked epithelial hyperplasia, with many miliary abscesses in the epithelial growths, and also in the corium. The infiltration of the corium consisted chiefly of leucocytes, connective-tissue cells, and plasma cells. A few giant cells were present. Characteristic budding organisms, varying in size from 9 to 15 micra, were found in many sections. Some of the organisms were more or less filled with round, spore-like bodies.

Cultures: The organism grows well on various media in the form of a mould fungus. It was obtained repeatedly in pure culture from the minute abscesses on the borders of the cutaneous lesions. Morphologically, the organism is apparently identical with one reported by me in the JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES, May, 1902, page 198, and of which there are more illustrations (Figs. 30, 32 and 33) in the general summary published in the *Journal of the American Medical Association*, June 7th, 1902.

The relation of the systemic tuberculosis to the cutaneous blastomycosis in this case is apparently purely accidental. It is, on the whole, surprising that secondary infection with tubercle bacilli does not occur more frequently in cutaneous blastomycosis, in which ulcerating, soft papillomatous, or even mushroom-like, areas are exposed for months or years to the bacteria of the air. Secondary pus infection occurs frequently in these cases, yet of thirty-five reported cases of blastomycosis in two only has tuberculosis been demonstrated.

PLATE IV.—To Illustrate Dr. F. H. Montgomery's Article.



Fig. 1.

FIBROSARCOMA CUTIS.

By James C. Johnston, A.B., M.D.

New York.

THE remarks which open this paper will be understood to apply only to the fibroblastic or spindle-celled sarcomata of the skin. From the group are excluded all round-celled growths, both large and small. The former are almost invariably endotheliomatous and the latter lymphoid in character. I am not prepared to assert that there are no round-celled sarcomata in the strict sense of fibroblast derivation, but I have yet to see one whose diagnosis stood thorough investigation.

There are some striking clinical features in fibroblastic sarcoma which are characteristic of this type, so far as my experience goes, and distinguish it in its gross appearance from endothelioma and epithelioma. These features are the very slight malignancy, the consequent or concomitant absence of metastasis in the skin, nodes and viscera, the extremely slow spread, the tendency to progression in one spot with spontaneous involution in another, the absence of pigment except for that which results from hemorrhage and the superficial character of any ulceration. The pathological findings will be considered later on.

There are two clinical varieties of sarcoma, one in which the tumor process occurs in a single patch as in the case to be described; and one in which it is disseminate and the growths rarely attain a large size. I doubt if the sarcoma in question here would ever cause death. Those cases which terminate fatally are disseminate and the patients perish, as they do in granuloma fungoides, by cachexia. The man upon whose condition Koehler and I reported (Journal of Cutaneous and Genito-Urinary Diseases, Jan., 1902), is cachetic and will probably not live long. Even these cases live a long time and those whose tumors show myxomatoid degeneration in their stroma, seem to suffer no detriment to health and little inconvenience. I have reported one such instance (*ibid.*, July, 1901) and have seen two others, one of which had successive crops of tumors removed time after time. The myxomatoid sarcomata have apparently a certain predilection for the lower abdominal wall and adjacent portions of the thighs; the fibro-sarcomata for the extremities.

With regard to the absence of metastasis, fibroblastic sarcoma is like the sarcoid tumors and fibroma itself. Although the failure to form metastasis goes hand in hand with benignancy, the correlation is by no means perfect. Granuloma fungoides is inevitably fatal in the last analysis. Internal growths have been reported in two of the sarcoids, granuloma fungoides and Kaposi's hemorrhagic sarcoma, but the occurrence is very rare and the findings are open to reasonable doubt in view of the fact that the authors seem themselves not quite certain that the cells are identical with those of the skin. Dissemination in sarcoma is not a metastatic process as in endothelial and epithelial new growths, but a simultaneous development in any number of independent foci. The diffuse infiltration, not uncommon in many types, is probably due to the fusion of adjacent patches.

Evolutionary changes are best seen clinically in a tumor which occurs in a diffuse patch as in the present case. The impulse to cell proliferation, whatever that may be, selects a spot apparently at random and the growth rises above the skin level, carrying the epidermis with it and generally keeping the covering intact. Ulceration is superficial and is seen generally in situations where rubbing from the clothes is constant. The tumors do not lobulate but often, as in fibroma, show a basal constriction, due, probably, not to involution there but to a lateral spread above the site. In none of my cases has the restriction been carried to this point of strangulation of the pedunculated mass. As the growth is unlimited, so may spontaneous involution be complete.

Regarding treatment, sarcoma is in a class by itself. Excision is generally inadvisable, always so in disseminate cases. It may be undertaken in case of a single patch for cosmetic reasons and because there will be less of the growth to deal with later, but a return is to be expected because it is practically impossible for the surgeon to determine where the shading into the surrounding tissue actually terminates and because generalized sarcoma constantly presents new tumors; further, the healing process even by first intention stimulates fibroblastic proliferation. Incision should be made an inch wide of any perceptible thickening and through the subcutaneous fat. There are few reports on treatment by X-ray. It is doubtless an ideal method when the growth occurs in one spot. Beck has held an inoperable case in check by this means (*N. Y. Med. Journal*, Nov. 16, 1901). In disseminate cases certainly, in all of them probably, arsenic injections are indicated., They are

only slightly painful if the needle is inserted deep into the tissue of the back and buttocks. To secure any results they must be given in full doses over a long period. Dr. G. W. Wende, of Buffalo, gave his case of hemorrhagic sarcoma a daily injection for more than two years, but the result leaves nothing to be desired.

History: The patient was a middle aged man and was operated on by Dr. F. S. Dennis in Bellevue Hospital. It is by his kind permission that I was enabled to use the material. The evolution of the patch was extremely slow. The patient declared he had had it for twenty years. It was located on the shoulder and was excised *in toto*. There were no metastasis and no growths elsewhere. The customary history of injury was elicited. Rubbing of the clothes may have added somewhat, certainly in the production of ulceration.

Gross Appearance of Tumor.

The photograph (Fig. 1) represents the growth as it actually appeared and very nearly life size. Progression had taken place from *c* to *a*, the former being the older portion, most of which has undergone complete involution. The surface is fairly smooth, traversed by ridges here and there and by a bridle running lengthwise. The epidermis is thinned and shows dilated vessels beneath. At *b* is the first of the pedunculated, sessile masses. It is considerably constricted, rounded on the free surface and pressed flat on the skin beneath. At *a*, where the growth spreads over a wider area, it is also more elevated and shows a superficial ulceration (black in the photograph). The whole tumor area was extremely hard even in the fresh state.

Histology: Sections were taken from the points *a*, *b* and *c*. The first and second show the full development of the process. The photographs, figs. 2 and 3, are taken from *b*, because the ulceration added adventitious elements to the picture. The growth is confined practically to the reticular layer and subcutaneous tissue as almost all skin fibro-sarcomata are, rather sharply limited by the papillary body above and merging gradually into the fibrous tissue below. Above, the papillæ and pegs are somewhat flattened and the cutis vessels are widely dilated. A little inflammation and hemorrhagic pigments are present, the latter free, and in chromatophores.

The pigment gives the reaction for free iron (Perl's test). The tumor is made up of fibroblasts, spindles of medium size with hyperchromatic nuclei and a few mitotic figures. Between them there is a well developed reticulum of collagen, denser than is

ordinarily seen in the skin, and making a beautiful picture with a Van Gieson stain. The spindles have a whorled arrangement in places, in others they lie in lines between the connective tissue fibres and again they are placed parallel to blood vessels and lymphatics. This arrangement is due to the fact that all the fibroblasts, sub-endothelial and inter-fascicular, take part in the process. The size of the spindles varies somewhat, depending on their proliferative activity. Those in the resting stage show little protoplasm and elongated nuclei which are twisted and distorted by pressure of the surrounding tissue. The blood vessels are fully formed; that is, there are none hollowed out, as sometimes happens, in the tumor mass itself. Their endothelium is slightly swollen. The intercellular recticulum of collagen lying between the spindles is considerable in amount, often occupying (see fig. 3) more of the field than the fibroblasts.

The tumor process shades so imperfectly into the subcutaneous tissue that it is difficult even by the microscope to determine the limit of the growth. Down to the fat the fibroblasts have a swollen appearance with increase of nuclear chromatin like that of the neoplastic cells.

Sections taken from the point *c*, show quite a different picture. Involution is almost complete. The fibroblasts are fewer in number and have generally the appearance just described as of the resting stage. The increase of connective tissue remains, and the epidermis shows the flattening effect of the pressure from below. It is reduced in places to a narrow line of a few rows of cells without interpapillary projections and appendages. As the fibroblastic element fades out, this endothelial growth begins to occupy the centre of the picture. The vessels seem more numerous than in normal skin. They are lined by swollen, cuboidal endothelium which now and then nearly blocks the lumen. This change is uniform throughout the section. It is a hyperplastic, not a tumor process.

The differential points in the histology of cutaneous sarcomata are these: a process confined to the reticular layer and hypoderm, shading into the sub-cutaneous tissue, its bulk composed of spindle-celled fibroblasts of different sizes with vesicular or uniform elongated nuclei, an intercellular fibrous reticulum, and lastly, an endothelial hyperplasia which becomes more pronounced as the sarcoma begins to undergo involution.

PLATE V.—To Illustrate Dr. J. C. Johnston's Article.



Fig. 1.



Fig. 2.

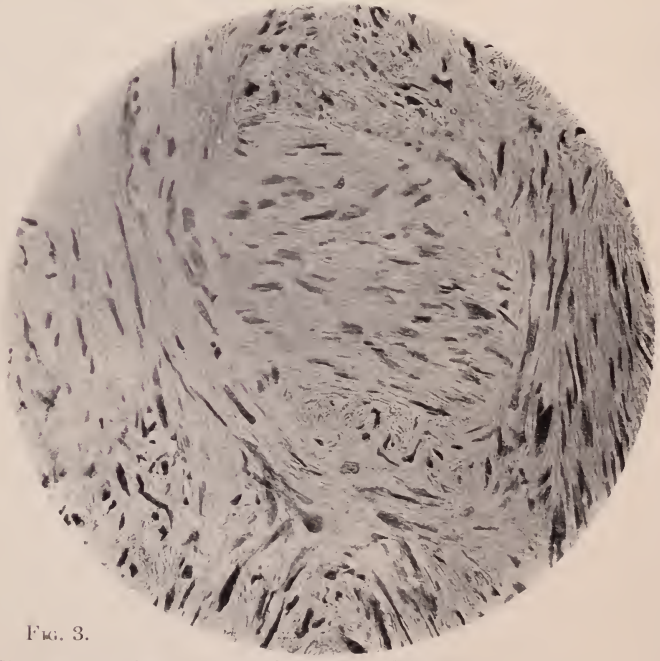


Fig. 3.

Fig. 1. *Gross appearance.* Size same as that of original growth. Figures *a*, *b*, and *c* indicate points from which tissue was removed for study.

Fig. 2. *Microscopical appearance.* Section taken from *b*. Fibrosarcoma, showing arrangement of fibroblasts and localization of tumor. X 60.

Fig. 3. *Microscopical appearance.* Section taken from *b*. Fibrosarcoma, showing dense intercellular collagen and fibroblasts with elongated, distorted nuclei. X 200.

THE PROPOSED DERMATOLOGICAL REFORM.

By M. L. Heidingsfeld, M.D.

Cincinnati.

AN effort is being made to reform dermatology by ignoring the rôle which the primary and secondary lesions play in the nosology of cutaneous affections, and to establish the fundamental principles of dermatology on purely anatomical genetic principles. L. Phillippson, assistant to Prof. Tommasoli, of the University of Palermo, Sicily, has been most prominently engaged in this work, and has recently set forth his views in an article, which appeared in the *Archiv. f. Derm. u. Syph.*, Bd. 58, and which in turn has called forth an excellent critical review by Herman G. Klotz, in the Journal of Cutaneous and Genito-Urinary Diseases, November, 1902. Klotz, in summing up his review, states that three questions submit themselves in every contemplated reform. 1. Is there anything to reform? 2. Is the proposed reform practical? 3. Will its execution really reform? The three questions are answered unequivocally in the affirmative, but the second is qualified by the statement that its solution will entail a vast amount of future labor and investigation, and could only be accomplished in the course of several generations.

I will not attempt to enter into the details of the contemplated reform, but wish to consider a few broad general principles the reversal of which, such a reform, if consummated, would entail. In other words, the evils and shortcomings of every condition find their gradual and proper correction in time, so that any change of a reformatory character is effected as a slow natural sequence, without the necessity of a directing or dominating influence. The Reformation would have doubtless been consummated without the guiding hand of a Luther, and the American Independence even without a Washington, simply because the influences working for their establishment were long active, and the conditions were favorable for their achievement. Secondly, long established and generally accepted principles owe their recognition and maintenance to the most painstaking and patient investigation. They remain as models because of the greater convenience and better forms of adaptation. The principles of dermatology as established by Wil-

lan, based upon a consideration of the elementary lesions, have answered admirably as attested by the fact that classical and clearly defined descriptions of the various forms of skin affections have been handed down through a long line of patient and painstaking investigators, and have received prompt and universal, and to this day, permanent recognition in practically all climes and in all tongues. The reluctance to break with old traditions is *not* because of reverence, but because the old has been satisfactory even with all the demands which have been made upon it by the new. The old, it is true, with all its time honored efficiency, has its shortcomings, but not until the calm judgment of the many is impressed that the new possesses decided advantages, will the efforts of the few be able to effect material change. Kaposi's and Thibierge's description of acne varioliformis may show considerable variation, and the latter's clinical description of dysidrosis may vary considerably from a descriptive cut in the text, and the descriptions of dermatitis herpetiformis, neurodermatitis, etc., may fail to impart a clear conception of a distinct dermatological entity, yet I am inclined to seriously doubt whether or not these forms of disease would be any better or more clearly understood when considered from a purely histopathogenetic standpoint. In fact, it is difficult to estimate the actual benefit which the microscope, with all its improved *technique* and its very extensive researches into the vast store of material in this special field, has rendered to dermatology in recent years.

There has been lack of harmony in the descriptions of lesions due to the same processes which have been attributed to such a variety of inconstant causes, location, duration, secondary changes, therapeutic influences and the innumerably varied conditions involved in the *technique*, that thus far it seems an almost insuperable task to obtain uniform results, even under the most favorable conditions. If the greatest conflict of opinion will at times arise from the mere description of a simple cell (Plasma cells, Unna & Marschalko), it is not surprising that there should be a lack of general uniformity in investigations of a more extensive character. Under these circumstances it is highly probable that for the present, at least, the principles of dermatology cannot be clearly, firmly and definitely established upon a purely histo-pathological basis, and the old standard, with all its indefiniteness, and with all its objections and shortcomings, must persist until a more satisfactory substitute can be offered.

It is assumed that the dermatological reform to be broad, ac-

curate and complete, will entail more than a mere anatomical diagnosis, and that the histological examination must be fully considered in the absence of other clinical and genetic data in order to give the work sufficient scope and weight, otherwise the entire subject is left in a very indefinite and crude state. If this much is not accomplished no advance is made. Even the "status quo" is not maintained but a decided retrogression is effected.

Our present histo-pathological knowledge has not as yet advanced to such a degree that the exact nature of most diseases can be readily determined by a microscopical examination. Bacteriology, with its important place in cutaneous medicine, has not been able to materially change the aspect of this question, and the recognition of most affections still depends for rapidity, accuracy and satisfaction upon the clinical considerations based on the elementary lesions. Histology and bacteriology, however, hold a very important position and must not be ignored: their elaboration has been a great boon to this particular branch of science, but their importance is equally great and their application is equally efficacious under the old system.

If there is anything unsatisfactory or "rotten" (the term is a little strong), as Klotz puts it, that cries for reform, what is it? Surely it cannot be ascribed entirely to the descriptive names of very simple processes which are apparent and readily understood by nearly every tyro. It seems to me that the fault and solution lies elsewhere. A vast amount of histological and clinical material, good, bad and indifferent, has been gradually accumulated upon every dermatological subject, in which there exists so many inconsistencies that it is an almost insuperable task to give to each its proper value and importance. A great deal of the material is of unquestioned excellence and reliability, but much of its value is lost or at least diminished by close association with the mediocre and inferior. This rubbish which forms a considerable part of modern dermatology, is what cries for reform, and the master who will some day cull the good and reject the bad and indifferent will effect a true and genuine reform. Most of this rubbish has emanated from men who, though excellent clinicians, have never acquired sufficient technical knowledge to make a satisfactory histological or bacteriological examination. The spirit of investigation should be encouraged under the fostering influence of a high regard for the truth. The longing for eminence and notoriety, the attainment of predetermined results, the personal pride and gratification in confirming the

research work of some friend, acquaintance or esteemed authority, are to be avoided as a few of the many ulterior motives which dominate and are so clearly evident in much that has been presented. The good which will result from placing a proper estimate upon the material thus presented will be of inestimable value, and will curb the inclination to careless or underhand work. It will deter men from seeking eminence by unfair means, and if eminence has already thus been obtained, it will serve to remove their pernicious influence from surreptitious results, whether it be from the works of authorities or those high in position in our exclusive American societies. It is the plain duty of every investigator, of every collaborator to place the stamp of true value upon every investigation. And if any such work bears the evident mark of unreliability it should be promptly branded for its true worth. These measures will effect a greater and more necessary reform and impart a higher tone and standard in dermatology.

A few instances have recently occurred which brings home forcibly the necessity of such measures. A recent dermatological investigation which apparently possessed unusual general excellence and merit, entered into a detailed description of the changes in the nerve endings and nerve fibres in sections taken from specimens which, in the *technique*, were stated to have been hardened in alcohol. The specimens, however, did not give the slightest evidence of any of the changes mentioned, and certainly were thoroughly inadequate for demonstrating changes which ordinarily required a very delicate and intricate *technique*. It is needless to say that this contribution will doubtless find a much too ready and general acceptance.

A recent contribution in one of the standard dermatological journals contained a very extravagant description in which the most peculiar changes,—pigment in the stratum lucidum, the presence of blastomyces and parasitic elements, leucocytes subserving the purpose of culture media for spores, are recorded, taken from a case in which, from personal knowledge, there were no anatomical changes except those which the affection indicated. Yet this article, on account of the eminence of the reporter, will receive ready and general acceptance, and some day may be authoritatively quoted.

There are innumerable instances in medical literature of similar perversion, and nearly everyone can recall examples, such as the amœboid movements observed in the parasites of Paget's disease and cancer, characteristic and pathognomic bacteria and micro-organisms in various diseases of obscure origin where personal knowledge

of the reporter, or incongruity of the report, impels us to view with discredit, work that otherwise finds considerable credence and general acceptance.

These are the abuses that cry for reform, abuses of vital interest and of the utmost importance to reformed dermatology.

SOCIETY TRANSACTIONS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Twenty-Sixth Annual Meeting, Held at the Hotel Bellevue, Boston, September 18, 19 and 20, 1902.

The President, George Thomas Jackson, M.D., of New York in the Chair.

Address by the President. (See page 440, Vol. XX.)

Cases of Bullous Dermatitis Following Vaccination. By Dr. J. S. Howe, Boston.

Dr. Louis A. Duhring, of Philadelphia: I have listened with much interest to Dr. Howe's paper, because I think it is a very important one from a practical standpoint, and upon a subject which is not well understood by the profession at large. We, who practice cutaneous medicine, see cases of this kind from time to time, although I myself have seen comparatively few. I believe that by reporting cases of this character and discussing them, we shall aid the whole subject of vaccination and its results, and bring forward certain facts which are not yet as well established in the mind of the profession as they should be. I am quite in accord with the statement made by the reader of the paper that effects of this kind and other kinds may be produced by vaccination. I certainly have seen some remarkable exhibitions following vaccination, at brief or longer intervals. I think the reader of the paper has brought forward the subject in a proper manner, and has emphasized the point of importance in connection with the cases that came under his observation. What strikes me particularly is the fact that the cutaneous manifestations in this series of cases were all much alike; they were of the bullous type and similar in most respects. The fact, in my opinion, was not sufficiently emphasized that the cutaneous manifestations were merely one expression of a general disturbed condition of health. The reader called attention to the fact that the internal organs were generally affected, all of which goes to prove that the skin, in this series of cases, was but one manifestation of a general and, I think, septic condition. We must grant, I think, in the light of the history of these cases, and

what we know of other similar cases, that they are the direct or indirect result of vaccination. While we hear a good deal, *pro* and *con*, about vaccination, of its injurious results on the part of those who are opposed to it and of its value on the part of those who favor it, I have always felt that those who are opposed to vaccination, or rather those who have brought forward the possible ill-effects of vaccination, did not in some instances have a fair hearing. I myself have seen cases at least similar to the ones reported by Dr. Howe, as well as others where the local and constitutional manifestations were undoubtedly the result of vaccination. I wish to state, however, that I have seen similar manifestations produced by other causes than vaccination, and this brings up a general subject, and one which is strongly impressed upon my mind, namely, that the same cutaneous manifestations may be produced by various causes. This fact is being more generally recognized from year to year—more so than it was twenty-five or thirty years ago.

The long incubation period in Dr. Howe's cases, from four to six weeks, is singular, but we recognize that this may be the case and it is no argument against the assumption that the manifestations were due directly or indirectly to vaccination. I am inclined to think that the virus which induced these symptoms was introduced at the time of vaccination, and was not a subsequent infection. The reader of the paper referred to a series of cases which was reported some years ago by Dr. Bowen, and called attention to certain differences between those cases and his own. I think the difference in the symptoms may perhaps be accounted for by the fact that Dr. Bowen's cases occurred in infants and children, while Dr. Howe's patients were all adults. Most of us will admit that the same cutaneous disease may run a certain course in the child, and an entirely different course in the adult: what may run a mild course in children may prove fatal in the adult. That is true of pemphigus.

Now, how shall we designate this form of disease? I do not regard this as a matter of great importance. I think Dr. Howe has acted wisely in selecting the title he has and connecting it with vaccination, because it is to that point that we wish to call attention, namely, that instances of bullous dermatitis, often severe and even running a fatal course, do at times follow vaccination. I think, therefore, that the term may stand for the present, and perhaps it would be well not to give another designation to the disease. That it is closely allied to what is known as semi-malignant or malignant pemphigus, I think probable, but whether we call it bullous dermatitis from vaccination, or pemphigus from vaccination, or malignant pemphigus, matters very little at the present period. From the photographs exhibited one could hardly tell whether it was a case of bullous dermatitis from vaccination or one of semi-malignant pemphigus.

Dr. Joseph Zeisler, of Chicago: I would like to continue this discussion along the line of thought suggested by Dr. Duhring. I agree entirely with Dr. Duhring that it is wise on the part of Dr. Howe and other contributors who have observed this class of cases to give the affection only a provisional name. It is better to do this than to attempt to force this clinical picture into any well recognized type. I did not particularly relish the attempt to place it in the pemphigus class. I would rather see the two remain separate, because I do not believe there is any further relationship between them besides the bullous lesions on the skin, which is but a banal expression. I would rather see it placed in the class of the toxic erythrodermata. I certainly can see no relation between Dr. Howe's cases and dermatitis herpetiformis.

Dr. Edward B. Bronson, of New York: The class of cases reported in Dr. Howe's paper is extremely rare and interesting, but I do not think there is sufficient evidence that vaccination, *per se,* is accountable for the disease. Though all these cases seem to have followed vaccination, there is every reason to believe that it was not the vaccine virus proper that caused them, but rather some accidental and exceptional factor, such as perhaps an admixture with the vaccine virus of some peculiar septic material.

As to the character of the disease, it is difficult, perhaps, to classify. It is closely analogous to pemphigus, but differs from it in its acuteness, in the constitutional symptoms and the tendency to suppuration. Some of the photographs shown by Dr. Howe suggest impetigo herpetiformis, especially in the peripheral extension of some of the lesions. I judge, however, that there was very much less suppuration in these cases than in that disease. The disease was certainly a systemic one and probably of a septic nature.

Dr. Augustus Ravogli, of Cincinnati: I agree perfectly with the idea expressed by Dr. Bronson that vaccination, *per se,* cannot be held accountable for this disease. It is only responsible to the extent of any other form of trauma which leaves the door open for infectious germs, which may explode and produce these infections. These cases are, in a certain sense, closely allied to pemphigus neonatorum, where we find pretty nearly the same condition; that is, enormous bullæ, with the skin falling off in shreds. These lesions have been traced to a staphylococcic infection. I have had several cases of pemphigus neonatorum occurring in the practice of midwives who, suffering from a dermatitis of the fingers, had infected the children during delivery.

I have had several cases of bullous eruption following vaccination, and one of these patients died with the same symptoms as described by Dr. Howe—that is, symptoms of septicæmia. Several other children have recovered, but bullæ continued to form for one and even two months, the lesions covering the arms, legs and body. I do not think

that vaccination, as vaccination, is responsible for these cases, excepting to the extent that we have produced a trauma which affords a means of entrance to these malignant germs, which subsequently produce infection.

Dr. JOHN T. BOWEN, of Boston: As regards the cases of bullous dermatitis in children following vaccination that I reported a year or two ago, I have seen two additional cases this year, making eight in all. The last two tallied quite closely with those I reported before. One of the former series I hope to show during the morning session on Saturday. The type of the disease in the case is severe, having persisted for five years.

With regard to the difference between the cases I reported and those described by Dr. Howe, it seems to me to be more pronounced than one could account for by the difference in the age of the patients. Dr. Howe's cases had the appearance of an epidemic, all having occurred during the past year. So far as we know, similar cases never occurred here before. My cases were stretched out over a period of five years or six years, the first one occurring in 1895. The disease occurred in children and the eruption showed marked points of predilection, such as the mouth, nose, wrists and ankles. None of my cases died. They had no rise of temperature nor severe systemic disturbance. The mucous membranes were never affected, and in this they formed a strong contrast to the severe forms of pemphigus or bullous dermatitis. My cases differed so materially from those described by Dr. Howe that it does not seem to me probable that they were the result of the same infective agent. I have no further light to throw upon this subject. The cases reported by Dr. Howe are as inexplicable to me as were my own. In his cases, however, the theory of some septic inoculation is more probable than in mine.

Dr. HENRY W. STELWAGON, of Philadelphia: In pemphigus we have a certain symptomatology, and the cases described by Dr. Howe correspond to that. They all conformed to the bullous type of eruption. If the infection occurs in these cases simply owing to the opening or break in the tissues giving opportunity to subsequent accidental entrance of the causative germs, then we should also see such examples following ordinary cuts and abrasions, which we all know is not the fact. I think we can feel fairly confident, therefore, that the germs of the infection were introduced with the vaccine virus. I recently saw an article by Bulloch and Pernet, in the *British Journal of Dermatology,* in which the writers reported a number of cases of acute pemphigus occurring in persons who handled animal products, and it occurs to me that in the cases described by Dr. Howe the infecting material might have been accidentally obtained from the animals from which the vaccine was procured.

Dr. CHARLES J. WHITE, of Boston: In one of these cases which we

had at the Massachusetts General Hospital, the lesions were distinctly erythematous in character, suggesting strongly erythema multiforme. Where bullæ existed the chambers were so flat that there was scarcely any fluid in them at all.

Dr. James C. White, of Boston: I have seen two of these cases. One of them, as my son stated, was distinctly erythematous. When the patient entered the hospital he was apparently not seriously affected. There was an eruption about the axillæ and pubes, which subsequently became universal, and although bullæ did appear, they were not very full. Some of them appeared on parts of the skin where there had been no previous erythema, but they were generally preceded by an erythematous stage. During the later phases of the affection—the last two days—all these bullous areas became excoriated and he exhibited large denudations of skin, from which the fluids of the skin were flowing freely. He died, and the pathological changes were similar to those described by Dr. Howe. The other case which came under my observation ran a similar course to this one, but whether it ended fatally or not I do not know, as the patient disappeared.

This entire series of ten cases is extremely interesting, and wholly unlike any experience of mine in many years. In the first place, these persons were recently vaccinated, and I do not doubt that these symptoms arose from some virus which was inserted at the time of vaccination. It was derived not from one source, but probably from many sources. The number in which these symptoms occurred of course represents but a very small percentage of the persons vaccinated. One of the most extraordinary features of these cases is the long period of latency. In some of them the symptoms did not develop until nearly two months after vaccination, and then ran a rapid and severe course. I have no doubt that the cause of the symptoms was a virus introduced at the time of vaccination.

As regards the classification of these cases, I agree with the statement made that we must have a descriptive title. They are examples of a dermatitis of an erythematous, bullous type, chiefly bullous. I do not think the eruption is anything like ordinary pemphigus. All the cases were in adults, while in Dr. Bowen's cases the patients were children and in none of them did the disease terminate fatally. It appears to me that if the infection in these two series of cases were the same, the disease would run a more rapid and severe course in children than in adults, as the powers of resistance are greater in the latter than the former.

Dr. J. Nevins Hyde, of Chicago: While I agree with what has been said regarding the extraordinary character of the cases described by Dr. Howe, I should be sorry to have it appear in the transactions of this Association that it is the opinion of its members that the symptoms were the result of vaccination. I think we all agree with Dr. Bronson

and the last speaker that some germ must have been introduced, most probably at the time of vaccination. This germ, apparently, had an extraordinarily long period of incubation, which, in part, may account for its effects; but none of the speakers, so far as I can remember, has laid any stress upon the character of the soil in which this germ was implanted. Dr. Howe, in describing his cases, stated that several of the patients were distinctly alcoholic, while in regard to others, he said, their habits were not known. In reply to what Dr. White has just said in regard to the increased powers of resistance in adult life, I would say that this rule does not apply to an adult whose powers of resistance have been impaired by chronic alcoholism.

To those who believe that the symptoms described by Dr. Howe were the result of vaccination, I would say that I have seen, and others have seen, cases where almost identical symptoms occurred in patients who had no previous record of vaccination. The fact should also be borne in mind that an enormous number of persons were vaccinated in Boston during the period in which these rare symptoms developed, and that only a very few subjects of vaccination betrayed these symptoms. I think the inference is perfectly clear that the germ which produced these rare lesions, and which I believe was introduced at the time of vaccination, has no essential connection with vaccine virus, but was an accidental organism, which found a congenial soil in patients whose powers of resistance had been weakened by chronic alcoholism.

Dr. William T. Corlett, of Cleveland: I feel grateful to the reader of the paper for the careful record of cases together with the information he has given us upon this subject. I have been at a loss on several occasions as to where to place this special form of bullous dermatitis. A few years ago, when our soldiers returned from Cuba, I had an opportunity to observe a form of bullous eruption which seemed to me to conform to bullous impetigo, while in many respects it conformed to the description of cases as given by Dr. Howe to-day. In this series of cases the staphylococcus was found in all cases. In one case only was the streptococcus found. During the past year three cases have entered the Lakeside Hospital which conformed in clinical appearance to a group I have been unable to classify satisfactorily. All of these patients were adults: all of them belonged to the lower walks of life; two ended fatally and the third was taken away from the hospital by his friends and it was subsequently reported that he had recovered. The description of Dr. Howe corresponds precisely with each of these three cases, but in none of my cases was there any history of vaccination for many years previously. In all of my cases the mucous membranes were involved. In my first fatal case a post-mortem was refused. In the second case the only changes observed after death were the signs of a pneumonia.

It seems to me that vaccination may not be the only cause—if it

be a cause—of this form of dermatitis. The only case that has come under my observation in which the symptoms were associated with vaccination was that of a boy about sixteen years of age; in this case, elsewhere reported, the lesions, which were bullous in character, appeared about three weeks after vaccination and conformed very closely to the cases described by Dr. Bowen.

In Cleveland at the present time, the Health Department—if it can be so called—has joined the ranks of the anti-vaccinationists, and for a time the public was regaled with—"How Cleveland was rid of small-pox." In this it was claimed that vaccination was followed by numerous and grave diseases, while fumigation with formaldehyde was all-powerful as a means of stamping out the plague. Naturally this gave rise to many arguments, for and against vaccination. We have, however, never seen a case, as described by Dr. Howe, following vaccination. In my own clinical experience I recall only one instance of an eruption following vaccination, and in that case the lesions conformed very closely to impetigo. It is a wonder, considering the lack of care used in vaccinating, that impetigo does not oftener follow vaccination.

Dr. William A. Pusey, of Chicago: I had the pleasure of seeing one of these cases last winter. As to what name we shall give them, I think that point is not of particular importance. Personally, I believe they belong in the same group with pemphigus and dermatitis herpetiformis. Several years ago I published a case which was intermediate in severity between these cases reported by Dr. Howe and the cases reported recently by Dr. Bowen.

Dr. John A. Fordyce, of New York: It is impossible that the cases reported by Dr. Howe were directly due to the vaccine virus implanted upon a soil that was very susceptible. We may have extremely malignant cases of smallpox, and again, the attack may be very benign. It is possible that bullous eruptions following vaccination may simply be due to the vaccine virus acting upon a person whose system is very susceptible to that particular poison. While these eruptions following vaccination may be accidental, it is my impression that they are due to an intensified action of the vaccine matter upon a susceptible individual.

Dr. George F. Harding, of Boston: The point brought out by Dr. Hyde regarding the possible connection between alcoholism and these infections following vaccination I think is worthy of consideration. I have seen one or two of these fatal cases, and in each instance the patients were distinctly alcoholic.

Dr. D. W. Montgomery, of San Francisco: I have never seen any instances of disease like those described by Dr. Howe, but from the histories given I cannot help being struck by their similarity to the cases reported by Bulloch, Pernet and Hadley. These men reported

two cases of bullous septicæmia, which they called acute pemphigus. I think in both instances the affection occurred in butchers, and followed wounds made with butcher-knives. Both ended in death, and a micro-organism, a diplococcus, was isolated in both. I believe the cases reported by Dr. Howe must be of a septic nature, and I am not willing to accept the theory that they were due merely to the introduction of vaccine virus.

Dr. Randolph B. Carmichael, of Washington: I cannot throw any light upon these cases, but I am very much interested in the subject, because I saw two similar cases in the hospital last winter. One was in a negro woman who had not recently been vaccinated, and it ended fatally. We called it pemphigus for want of a better name. The other case was in a man who had been vaccinated about three weeks previous to the appearance of the eruption. He ran a high temperature, 103, 104, but ultimately he recovered. I saw him several weeks ago, when he had a relapse, but he seems to be getting on well.

Dr. George H. Fox, of New York: I would not take up any more time to continue this discussion were it not for the fact that this subject is one of the highest importance. It seems to me that the question as to what these eruptions may be is of utter insignificance as compared to the question of whether they have any relation, direct or indirect, to vaccination. I do not think it has been adequately proven that these eruptions are associated with vaccination, and am very glad that Dr. Howe referred to his cases as merely occurring after vaccination and did not assert that they were caused by vaccination. Every case of bullous disease I have ever treated has probably occurred after vaccination—perhaps a long time after. It is to be noted that the eruptions reported by Dr. Howe appeared sometime after vaccination, four, six and even eight weeks. We know that during the past two years a wave of vaccination has swept over the entire country, and during that period I have seen an unusually large number of cases of pemphigus. I would not attribute these cases of pemphigus to vaccination, although some occurred a short time after. It is very possible, however, that vaccination is indirectly responsible for some bullous eruptions, as a toxic germ may find an entrance through the vaccination-wound. Still, there is no proof of this: we are not certain that it occurs, and it is a serious matter for us to make the assertion that vaccination is the direct cause of these eruptions, especially at this time, when the anti-vaccinationists are up in arms and seeking every opportunity to prejudice the public in their favor. Until we are certain that vaccination is the cause of these eruptions, we are doing ourselves an injustice, we are doing the Association an injustice, we are doing the profession at large an injury and affording aid and comfort to our enemies by making such an assertion. Dr. Johnson informs me that he received a communication from a gentleman asking

the loan of the plates of Dr. Brown's article published in the JOURNAL; he was at the point of granting the request when he learned that the man was connected with the anti-vaccination league. This shows how active these people are, and I can assure you that anything we publish in our transactions will be used by them to the injury of the profession and the public.

Dr. ABNER POST, of Boston: It seems to me that we should be very careful before we take it for granted that these eruptions were due to vaccination. Practically, everybody in Boston was vaccinated during the period in which these cases occurred, and it would have been impossible to find ten unvaccinated persons in the hospital where these patients were treated. Under such circumstances, if we attribute these cases to the effects of vaccination, we might just as reasonably attribute any unusual manifestations to that source. The average incubation period in these cases was five weeks and the extreme limits three and sixteen weeks, showing a very wide discrepancy indeed.

I wish to emphasize the above points because at a time when vaccination seems to be put on the defensive we should be very careful not to attribute injurious results to vaccination which cannot be positively traced to that source.

Dr. HOWE (Closing the discussion): In regard to the prominence of the alcoholic element in these cases, to which reference has been made, I would say that it was the opinion of the physicians who had direct charge of these cases that all but two were decidedly alcoholic. In one of the cases I had positive evidence that this was so, because when I showed him at a meeting of the Dermatological Club he was intoxicated.

An Unusual Case of Epidermolysis Bullosa Hereditaria. By Dr. G. W. Wende, Buffalo. (See page 537, Vol. XX.)

Dr. DUHRING: I quite agree with the position taken by the author in his paper. It seems from the photographs presented that there was a certain amount of distinct inflammatory action in the skin, which bears some resemblance to eczema. He has not alluded to that, but certain lesions as seen in the photographs, about the hands and forearms, would rather indicate an eczematous inflammation. The position that the writer of the paper has taken to classify the case as one of hereditary bullous inflammation of the skin, I think is a proper one. There is no doubt that there are different types of similar disease affecting the skin, some of which would hardly come under the classification in which he has placed this case.

Dr. JAMES C. WHITE: These cases are very much like a series of cases which I reported some years ago, and during the session on Saturday morning I expect to be able to show two of them. I mention

this now so that the members may recall the writer's paper in connection with what they will then see.

Dr. Wende (Closing the discussion). In answer to Dr. Duhring's question: I am sure it could not be eczema, although the condition of the hand, as shown in the photograph, bears some resemblance to the disease, nevertheless, the entire course is foreign to eczema, the inceptive lesion being a bleb, after the subsidence of which there is a continuation of their development at the border, rendering the affection unique.

Four Forms of Generalized Exfoliative Dermatitis (Erythrodermies Exfoliantes Généralisées Besnier). By Dr. John T. Bowen, Boston.

(See page 548, Vol. XX.)

Dr. Ravogli: I was very much interested in listening to Dr. Bowen's paper. I find that the question of exfoliative dermatitis is extremely difficult and complicated. I have had occasion to see some cases of dermatitis exfoliativa which I have referred to the semi-category of the erythrodermies, and in so doing I followed the opinion of Dr. White. I had a case in the hospital, that of a boy four years old, who, when he was admitted, was covered with an eruption of red patches with thin scales which had nothing to do with psoriasis, nothing with eczema, and I found that the name erythrodermies covered the case perfectly. If we use the term dermatitis we immediately get the idea of an inflammatory process, while in this case there was no fever, no reaction whatever, and very little itching. The microscopic examination showed very slight infiltration and small leucocytes in the derma, but scarcely enough to call it an inflammatory process. By the term erythroderma we understand a red derma, and I described my case as one of erythroderma squamosum, following the opinion of Dr. White.

These affections should not be mixed up with erythema scarlatiniforme and other desquamative conditions which are truly of an inflammatory character. I have had in my practice a case which showed all the symptoms described by Besnier as erythema scarlatiniforme. It had nothing to do with scarlatina, however; there was nothing but an erythematous eruption covering the upper and lower extremities and followed by a thick desquamation. It was associated with some fever and redness of the throat, but nothing like in true scarlatina. The patient was living in the country and there were no cases of scarlet fever in the neighborhood. The disease lasted not more than three weeks and then entirely disappeared.

Dr. James C. White: I have been in the habit of recognizing three types of exfoliative dermatitis. First, The generalized well-marked recurrent form, a fugitive process which sometimes recurs within a fortnight, and which is very difficult to distinguish at first from

scarlet fever. Second, a deeper seated process of indefinite duration, which is represented by the type not infrequently set up in psoriasis under the influence of chrysarobin. The exciting cause, however, is not always apparent. Third, a much more serious process in which the skin is very deeply affected, in which there is uniform redness at times, great desquamation, and which often terminates in pemphibold lesions and deep excoriations, and the cases I have seen of that type have uniformly proven fatal.

The above are the three most distinct divisions of this affection, according to my experience. That they are related to each other I do not think follows:

Dr. S. Sherwell, of Brooklyn: I regret that I did not have the opportunity of hearing the whole of Dr. Bowen's paper, and am therefore scarcely in a position to discuss it. I have seen a number of cases of pityriasis rubra in an aggravated form, most of which have ended fatally. I believe Hebra makes the assertion that this is the only disease which invades the whole of the external cutaneous envelope, including the prolongations, such as the nails, etc. I have reported cases where the use of linseed oil baths accomplished good results.

I have seen, of course, the milder, fugitive cases. Not long ago my little grandchild developed one of these scarlatinoid eruptions which looked absolutely like scarlet fever, but which was distinctly due to a ptomaine and was the result of eating some infected meat. The eruption disappeared without any marked symptoms. I think Besnier's term is a good one, but I do not consider it a better than a variety of other terms that are used for the same affection, but as it is in such general use, think it well to be continued in usage.

Dr. S. Pollitzer, of New York: We welcome every contribution to our knowledge of this subject, which is at present still in a very badly mixed state. I believe we are justified in dividing this condition of red, scaly skin into more than the three groups which Dr. White mentioned. We have, in the first place, the well marked recurrent scarlatiniforme erythema; second, the desquamative erythema following in the course of a severe eczema, psoriasis or lichen ruber; third, that following the ingestion or application of certain drugs, such as mercury. The latter two groups constitute the class which Bazin described under the name of herpétides exfoliatrices malignes. Then we have the dermatite exfoliative généralisée subaigu of Besnier-Brocq; and, finally, the pityriasis rubra of Hebra.

I think it is a little premature to put all these types of disease under a single head simply because they have the symptoms of redness and scaling in common. The Hebra form especially presents a well marked type of disease which deserves a position by itself. The scaling and redness followed after a period of greater or shorter duration, by atrophy of the skin and death of the patient, constitute a distinct

type of disease which has but little in common with the other forms of exfoliative dermatitis. The cases reported by Kaposi and others, in which recovery took place, are with questionable propriety grouped with the pityriasis rubra of Hebra since the diagnosis of the latter disease is not beyond a question until atrophy of the skin has set in. The cases of Kaposi have been regarded as forming a connecting link between the Hebra type and the Besnier-Brocq form, and if their relation to the Hebra type is not admitted then certainly the connection between the other forms of exfoliative dermatitis and pityriasis rubra Hebra becomes more than doubtful.

Dr. Bowen: I would ask Dr. White if he includes the pityriasis rubra of Hebra in his third class, together with other less typical forms?

Dr. J. C. White: I should include that as the one form in my third class.

A Critical Review of L. Phillippson's Reform of Dermatology. By Dr. H. G. Klotz, New York. (See page 487, Vol. XX.)

Report of the Committee on Nomenclature: By the Chairman, Dr. Hyde. This committee has made no report for several years. No member of the Association appreciates more than I do the need of a better nomenclature than we have at present. I think the time has come when I shall ask the Association to appoint a new chairman, and perhaps a new committee, so that this work may be taken up anew. I shall be very glad to assist such a new chairman in the discharge of the duties which are incidental to his position.

Clinical Study of 450 Cases of Nail Affections. By Dr. Charles J. White, Boston.

The Clinical Aspect and Treatment of Some Affections of the Finger Nails. By Dr. Frederick J. Leviseur, New York. (See page 502, Vol. XX.)

Dr. D. W. Montgomery: I can say that punctate depressions in the nails are not, in my experience, limited to psoriasis. I have paid attention to this symptom for a long time, and have found it in quite a variety of diseases. In fact, I have had some personal experience in this line. I had a numbness in the distribution of the right ulnar nerve, and with that, punctate depressions in the right little finger-nail. I found that my symptoms were due to the effect of cold. In writing my arm rested on a cold wooden desk, and this probably gave rise to a mild form of neuritis, which in turn caused trophic disturbances in the

little finger-nail. The trouble disappeared as soon as I covered the desk with a sheet of blotting-paper.

Dr. Zeisler: I have not lost my early interest in nail affections. I was somewhat surprised, in looking over Dr. White's table, that it included only eight cases of leuconychia, which we know is an exceedingly common affection. I had an idea that the percentage of such cases was much higher—as high as fifteen to twenty-five per cent. I would also like to ask why it is that his cases of transverse ridge formation include such a small number?

Dr. C. J. White: By ridge I mean an elevation without any depression.

Dr. Zeisler: How can you get an elevation without a corresponding depression?

Dr. White: Simply by localized hypertrophy.

Dr. Zeisler: I can bear out Dr. White in his statement that it is not possible to make a definite diagnosis from the appearance of the nails unless there are concomitant changes in the skin, because the changes in the nails are apt to vary greatly.

Dr. George T. Elliot, of New York: I do not know of any lesions which are more difficult to catalogue and to diagnose than those pertaining to the nails. I was exceedingly interested in these two papers, but I regret that no reference was made to affectious of the nails due to systemic conditions, and outside of disturbances about the matrix or affecting the nail itself. I have seen a large number of cases of nail disease in the way of malformations, ridging, brittleness, disturbed nutrition, etc., which were absolutely traceable to gout, either existing at the time or previous to the onset of the nail affection. I have also seen a number of cases in which there were discoloration of the nails, detached conditions or slight malformation, which were clearly traceable to anæmia of various degrees, and in which the nail affection disappeared with the disappearance of the blood condition. In addition, I have had cases—which are also mentioned in literature—where there have been malformations of the nails due to constitutional conditions, as, for instance, in the following case under care last spring: a woman who had reached the menopause, her menstruation was irregular, and with every menstrual period there would be an interference with the growth of the nail in the direction of transverse furrows and a splitting off of the nail tissue. Interference with the growth of the nails also occurs during other systemic conditions, as fevers, etc. Any slight trauma may cause a distortion of the nail, or a defect or a malformation, or some change in its appearance, and I have had occasion to corroborate the observation of Heidingsfeld and others that trauma incidental to manicuring the nails is sometimes followed by the formation of a white spot.

As far as tinea of the nails is concerned, I do not believe that

anyone can make the diagnosis without the microscope. The last case of supposed tinea which I saw was typical of that affection in so far as the gross appearance of the lesions was concerned, but the microscope failed to confirm the diagnosis; upon examining the patient's blood, I found the hæmoglobin reduced to 40 per cent. and a corresponding decrease in the red cells. Upon treating the anæmia, the condition of the nails also improved. Some twelve years ago I had in my house a French cook whose sister had an affection of the nails which she stated had existed since infancy. Upon examination I found that all of the finger-nails were about one-quarter or one-eighth of their natural size. Upon examining parings from her nails under the microscope, I was surprise to find the most perfect specimens of tinea I have ever seen. In other cases, however, where the gross appearance of the nails was absolutely similar, I have found no evidence of tinea. In conclusion, I believe that in nail diseases more attention should be paid to general systemic conditions than has usually been done.

Dr. Charles W. Allen, of New York: I might mention two cases of favus of the nails which I have seen since the last meeting, and recently presented before the N. Y. Dermatological Society. The patients were two young women, and in both instances the diagnosis was confirmed by microscopic examination. In both cases there were no favus lesions on the body. One case closely resembled the case of hereditary dystrophy just shown by Dr. White, and it is a curious fact that the mother of this patient had some affection of the nails for many years which was said to resemble that of the daughter. I treated both these cases with the X-ray, and one of the patients, whom I just saw in the country, is not yet cured, and the other has disappeared.

I would like to substantiate some of the remarks made by Dr. Leviseur regarding the affections resulting from the use of dye-stuffs: these effects are not confined to the nails, but also include the hands and arms. I had arrived at the same conclusion as the reader of the paper that the new combinations of pyrogallic acid and peroxide of hydrogen that are now so commonly employed for dyeing purposes produce lesions of the nails and skin which we were not accustomed to see before.

Dr. Hyde: I think that both Dr. White and Dr. Leviseur have furnished a very interesting contribution to this subject. I recall that while I was attending the meeting of the last Congress in London, Mr. Malcolm Morris remarked to me that we knew nothing about diseases of the nails. I think we now know more than we did then.

No attention has been called thus far to-night to the individual idiosyncrasy of certain persons with respect to diseases of the nails. While we do not know the exact statistics, yet it is within bounds to say that at least 75 per cent. of syphilitic patients never have diseased nails, but when syphilitic nail-disease does occur, it has been my ex-

perience to find a number of the nails affected. The same is true of psoriasis. The majority of psoriatic patients exhibit no nail symptoms, but when a psoriatic patient has diseased nails, the symptoms are often quite generalized, affecting all the nails very severely and obstinately, and often without generalized eruptive symptoms of the body.

In regard to what Dr. Elliot has so well said, I presume our statisticians have given us cases as they came under their observation, and have not touched upon cases of nail disease which did not happen to fall within the category of the 485 consecutive cases included in their table. We know that a number of general diseases are characterized not only by disorders of the nails, but even by loss of the nails. Exhaustive nervous disorders are often responsible for loss of the nails. In Charcot's disease I have seen the nail shed without structural changes in the nail tissue.

Dr. C. J. White: My series of cases was based entirely upon skin patients, and therefore would not include generalized diseases of any sort. They were all ambulant patients and were suffering from disease of the skin only. It is quite true that transverse depressions of the nail may follow any inflammatory disease, localized or generalized, of the body.

Dr. Leviseur: In my experience leuconychia punctata and striata is of comparatively frequent occurrence. Recently I saw four cases in one afternoon while examining the nails of forty-five dispensary patients, mostly women. As regards favus of the nails, I think under certain conditions you can make the diagnosis without the aid of the microscope, and that is, when we can see hollow spaces under the nail, while the nail-plate has a smooth surface. I have in a number of instances made the diagnosis upon such evidence, and was subsequently able to verify it by finding both clinical symptoms on the scalp and microscopical evidence of the fungus.

Note on the Histology of Herpes Zoster. By Dr. S. Pollitzer, New York. (Article to appear in February number.)

(a.) Report of a Case of Blastomycosis of the Skin:

(b.) A Preliminary Note on the Frequency of Pompholyx in New Orleans: By Dr. I. Dyer, of New Orleans.

Dr. H. G. Klotz, of New York: Dr. Dyer has distinguished between pompholyx as it affects the hands and the feet. I recently saw a case in which the hands were very severely affected, lasting several months. This patient has been under my treatment several times for attacks of the same disease, and upon one occasion the feet were more severely affected than the hands, but during his recent attack, the feet were comparatively free from lesions.

Dr. Hyde: At the St. Louis and other hospitals in Paris, I have

often seen French physicians make the diagnosis of pompholyx at a glance. The diagnosis there is exceedingly common, and our Gallican friends have very clean-cut, distinct ideas about it. The appearance of the feet, which Dr. Dyer described, is somewhat more common than is generally supposed, and in my judgment is generally traceable to transpiration from the surface of the feet. In the group of cases I have seen, and some Dr. Montgomery has seen also, we invariably examine the heart; and this has in so many instances revealed the presence of a cardiac lesion that I have been led to suspect the heart in every case of pompholyx affecting the feet, and in rarer cases the hands. These patients may be divided into several categories. Some have a cardiac murmur, some merely a weak heart, and some have a tobacco heart. We find it also in women who take a great deal of tea. These patients are usually a little worse in summer, because of the laboring of the heart during the hot weather. The first thing is the passive congestion, particularly of the feet, because those extremities are at such a distance from the circulatory centre. This is followed by a transudation of sweat or serum; then the maceration; then comes the dermatitis, and then the other cutaneous symptoms which Dr. Dyer has described. I would not like to make the assertion that all these cases originate from circulatory disturbance, but many of them do.

Dr. Ravogli: I fully agree with the opinion expressed by Dr. Hyde that the circulation has much to do with the production of these peculiar eruptions, but I think the vaso-motor nerves must also be taken into consideration. I have a little girl in my clinic who has a dystrophy of both hands: her hands are much larger than is natural for a girl of her age, and they perspire continuously and to such an extent that she cannot apply herself to any kind of work on account of this excessive hyperidrosis. Occasionally large bullæ form on the hands and fingers; these last for a short period and then break, followed by excoriation and crusting. When the lesions have almost healed there is a fresh outbreak of these bullæ, and she is as badly off as before. She is anæmic and suffers much from nervousness. I treat her with iron and arsenic internally, and use resorcin and sulphur on the skin, but the result has not been very satisfactory.

Dr. C. J. White: I do not quite appreciate the distinction between pompholyx and dysidrosis. I think the cases Dr. Dyer calls pompholyx we in Boston classify as dysidrosis or as hyperidrosis.

Dr. Dyer (Closing the discussion): The point raised by Dr. White is exactly the one upon which I would like to be enlightened. These cases have been variously reported as pompholyx, hydradenitis and dysidrosis. I think the latter term does not appear in the nomenclature of the American Dermatological Association. I should be glad to call these cases dysidrosis, as I prefer that term to pompholyx, but it has been practically obliterated from the English text-books. The

disease which is described in the books as pompholyx is not the disease as I see it, and the one which I have described here to-night. It is my own belief that these cases are of vaso-motor origin, and as the title of my paper states, this is simply a preliminary note. I intend to analyze these cases in the future and make as full a study of them as possible. These cases respond quickly to the use of strychnia, rarely lasting longer than ten days, excepting the more advanced cases, where the lesions have been aggravated by scratching, producing secondary changes. Ever since I have lived in New Orleans, I have myself suffered from recurrent eruptions of these lesions on the feet.

(*To be continued in next number.*)

NEW YORK DERMATOLOGICAL SOCIETY.

307th Regular Meeting, October 28, 1902.

Oscar H. Holder, M.D., President.

A Case for Diagnosis. By Dr. George T. Jackson.

The patient was a colored man with an erythema on the back.

Dr. S. Lustgarten suspected that the case was one of toxic erythema, but the history was very incomplete.

Dr. C. W. Allen said he looked upon the erythema as akin to urticaria, but without the element of itching, and possibly due to some drug that had been taken.

Dr. S. Sherwell thought it might be an occupation erythema arising from the friction caused by wearing a dyed flannel shirt. The brown anilin colors often gave rise to such a reaction.

Acne Varioliformis. By Dr. G. H. Fox.

The patient was a man presenting an eruption in the interscapular region. Dr. Fox said he was reminded of a case, without a diagnosis, photographed some years ago. In this case the lesions were very large, and the crusts were imbedded in the skin in this same region. Now that he had seen this second case, he felt sure that the one photographed some years ago was of the same nature.

Dr. J. M. Winfield concurred in the diagnosis.

Dr. J. A. Fordyce said that the case just presented exhibited many of the features of this disease, but many of the lesions on the chest were of a very unusual type.

Dr. George T. Elliot said that there were about sixteen other names attached to the disease, and it was one of those cases that had been designated by the French as a tuberculide. In his opinion, it was not acne varioliformis in the usual acceptation of that term. Microscopical examination would probably show that the disease was

connected with the sweat-glands, and that it would come under the head of a granuloma necroticum, as described by Dr. Johnston.

Dr. S. Sherwell said that there was a seborrhoic element in this case which was quite prominent. It was a question whether it was primary or secondary. He thought the case would recover under an ointment of white precipitate and resorcin.

Dr. J. C. Johnston said that the remarks of the last speaker seemed to support the contention that the disease was due, in part at least, to the special bacillus of seborrhea. It was just possible that this bacillus, which was nothing more than a staphylococcus, would be found in the lesions. Whether or not it had anything to do with it was another question. The speaker said he had a photograph of a lesion from a similar case. It was a hard nodule level with the skin, and with a slight seropurulent exudation at the follicle. The photograph showed that the infiltration surrounded the plexus in the neighborhood of the hair follicle. The latter was deformed, and contained in its center a mass of necrotic detritus. This infiltration was really granulomatous. This photograph was taken from the forearm.

Dr. E. B. Bronson said he could not reconcile it exactly with his ideas of acne varioliformis. The lesions seemed to be too decidedly inflammatory and showed too much papulation. There were none of the depressed, dark-scabbed lesions so characteristic of acne varioliformis. The distribution was also very unusual for acne varioliformis.

Dr. C. W. Allen said he would call it acne varioliformis.

Dr. Lustgarten said that, leaving aside all theoretical considerations, the diagnosis of acne varioliformis would seem correct from the clinical aspect, especially after inspection of the face. There was a peculiar syphilitic necrosis and characteristic crust, and apparently the same lesions were upon the chest and back, with slight changes, which could be explained by the difference in the structure of the skin in these regions.

Dr. George T. Jackson agreed with the diagnosis. In a recent work on dermatology he had seen it stated that the chest and back were frequent locations for acne varioliformis.

Dr. C. T. Dade agreed with the diagnosis.

Dr. Fox said that the forehead alone presented very typical lesions, and he thought there was little doubt about the eruption being the same upon the head and in the interscapular region. There were some lesions showing the imbedded necrotic crust with the little ring around them, giving a very characteristic appearance. If he had looked upon the chest alone he probably would not have made this diagnosis.

A Case for Diagnosis. By Dr. Fordyce for Dr. P. A. Morrow.

The patient was a man, twenty-four years of age, who had had the present affection three years. It had started on the elbow and extended up to the shoulder as a serpiginous ulcerative process without much inflammation in the skin. He began taking medicine two years ago. When first seen by Dr. Morrow, on October 26, he was taking no medicine, and there was no history of venereal infection. Dr. Morrow asked for a diagnosis.

Dr. Lustgarten said that the case was a very complicated one, but he would exclude syphilis from the arm. He would hesitate between a true miliary tuberculosis of the skin and a blastomycetic form. This question should be settled quickly by microscopical examination. The lesions on the nose seemed to be quite different. They had only developed within a few weeks, and there were two enlarged submaxillary glands which, if seen alone, would arouse the suspicion of a specific lesion.

Dr. Allen said that the case was, to his eye, very suggestive of syphilis with an added superficial infection. From the scars and the history he inclined to congenital syphilis.

Dr. H. G. Piffard said his diagnosis was acquired syphilis.

Dr. Fox said that, although it looked like a serpiginous syphilis at the first glance, he did not think it was, but he was uncertain as to whether it was an example of blastomycosis.

Dr. Elliot thought it was a case of syphilis. A little over a year ago he had seen a much more extensive case, and one not very dissimilar in its appearance. After the antisyphilitic hygienic treatment of the patient had been pushed to the fullest extent, recovery took place. The course of the process was clinically absolutely the same in that case as in the one now under discussion. Some years ago Dr. Taylor had described this form as a true serpiginous syphilide.

Dr. Winfield was disposed to think the case one of syphilis.

Dr. Fordyce said he did not think the case had been sufficiently long under antisyphilitic treatment to enable one to exclude syphilis by the therapeutic test. The appearance of the ulcerative process was strongly suggestive of syphilis.

Dr. Allen said he would like to ask Dr. Fordyce, if he recognized the serpiginous lesions as those of syphilis, how he reconciled that with a primary lesion of recent origin.

A Case of Generalized Morphœa. By Dr. James M. Winfield.

The patient was a woman, aged twenty-eight, born in England. When eight years old her mother had noticed a small pigmented nodular spot, just above the right groin. This spot gradually enlarged until its present size is about four inches long by three inches wide.

The skin over the diseased area is deeply pigmented, and while it is all more or less atrophied, there are a number of islands of markedly atrophied skin. These are also unpigmented. Since the primary spot twenty years ago a number of spots, some large and others small, have appeared on various parts of the body. They are all pigmented and atrophic, and have generally started as small nodules, accompanied by some pain. The most recent one is over the left scapula. It consists of a few hard, thickened plaques of skin slightly pigmented.

Dr. Dade agreed with the diagnosis.

Dr. Jackson did not think the case was one of morphœa, but only of an atrophic condition of the skin with pigmentation.

Dr. Allen preferred to call the case atrophoderma pigmentosa.

Dr. Bronson said he was unable to see that the case bore much resemblance to morphœa.

Dr. Fox thought the case was one of diffused atrophy of the skin similar to some cases that had been shown to this Society.

Dr. Sherwell said that he had seen the case before, with Dr. Winfield. The case bore an extraordinary resemblance to one that he had seen in Boston, in which the diagnosis made by a number of dermatologists was morphœa. The eruption began as a pseudo-inflammation. He had himself made the diagnosis of morphœa, or of localized scleroderma, and he was still of this opinion. He had presented to the Society at one time a patient having morphœa, the patches of which presented the same color as in the present case. Later on the patches became white.

Dr. Elliot said that the patches on the back appeared to be morphœa, but he was doubtful whether the patch on the abdomen represented the same process. Morphœa appeared under various colors, so that the color in this case did not vitiate that diagnosis. Some years ago he had presented before the Society a patient with morphœa, in which the color was purplish-red.

(*To be continued in next number.*)

ABSTRACTS.

The Influence of Light on the Growth of Hair, and Its Therapeutic Use in Alopecia Areata. By Dr. Schmidt, Assistant at Dr. Lesser's Clinic in Berlin. Archiv. für Dermatologie und Syph., Oct. 1902.

It has been proved that the hair of the head and the beard, as well as the nails, grows more quickly in the warm periods of the year than in the cold. As to the cause of this phenomenon, a certain importance has of late been ascribed to the so-called chemical rays of the sun. According to some observations made in the Finsen Institute in Copenhagen, the strength of these rays has been shown to be much greater in summer than in winter. It has been observed in some cases of lupus which have been treated according to Finsen's method, with concentrated chemical rays, that increased growth of hair appeared in the vicinity of the parts treated, after recovery from the reaction caused by the exposure. Moreover, several female attendants, who were in the habit of exposing their forearms to the rays during the treatment of patients, acquired an increased growth of hair on the exposed parts of their arms. Hence it has been assumed that the chemical rays stimulate the growth of hair, a fact, if proved, which would be of great therapeutic importance. The proof of this, however, is not yet apparent. It is possible that the inflammation caused by the rays, which brings about an increased supply of blood, and by that means an improved nutrition in the skin, plays a part in this phenomenon. It is not possible to ascribe to the chemical rays a specific hair-stimulating influence, as the *vicinity* of the places treated with the rays is the only part affected. It is possible to suppose, as has been said, that the inflammatory hyperæmia acts favorably for the growth of hair through a better nutrition of the skin. But it is still difficult to understand why the Röntgen rays, which also cause an inflammatory hyperæmia of the skin, cause falling out of the hair quite regularly, in spite of this hyperæmia.

Schmidt has made some experiments on guinea pigs to determine the influence of the chemical rays on the growth of the hair, by epilating a particular portion of the skin, and then observing whether the hair grew more quickly with or without the influence of the chemical rays. From one of these experiments it appears that the chemical rays had an inhibitory influence on the growth of the hair; and from none of the experiments could it be deduced that the chemical rays had a stimulating influence on the growth of the hair; for the epilated places were either equally well covered with hair after the same time, whether or not the animals were exposed to the action of the chemical rays, or a difference was shown which could be explained as an individual peculiarity in that the animals which, for example, showed a heavier growth of hair under red light than those which were exposed to sunlight, also showed the same appearance by daylight when the experiment was reversed.

Two cases of alopecia areata treated by the light method are reported. Jersild, regarding alopecia areata as a parasitic affection, ascribes the three following characteristics to the chemical rays: a bactericidal, a hair-stimulating, and an inflammatory characteristic. He declares that the reaction caused by the rays must remain within the boundary of the weakest inflammation to avoid scarring and permanent baldness. Of these three characteristics, the bactericidal and inflammatory alone have been experimentally proved, while the proposition that the rays produce an increased growth of hair rests solely on the observations that have been referred to, *e. g.*, a stronger growth of hair in the neighborhood of lupus patches that have been treated.

Of twenty-nine cases of alopecia areata, treated in the Copenhagen Institute, six remain without result. One of Schmidt's cases was treated with concentrated, the other with diffuse light, yet the reaction was the same in each; that is, a reddening of the skin, followed by scaling, was produced in both. The therapeutic effect, however, was quite different. In the first case, which was treated only seven times, from a quarter to a half hour, the normal growth of hair appeared in a few weeks. In the second case, which was treated twelve to sixteen times for an hour, there was a rapid falling of the hair after a few weeks, resulting in almost total baldness. The hair from other parts of the body also fell. The second case, however, had appeared to be of a much more malignant nature before the treatment was begun than the first. Schmidt thinks it possible that the second case may have been of a trophoneurotic character, and in this way may be explained the six negative results in the twenty-nine cases reported from Copenhagen.

As regards the more rapid growth of hair and nails in summer, no attempt is made to ascribe this to the action of the chemical rays. The warmth and its stimulating action on the blood supply and secretory functions of the skin, probably play an important part in this phenomenon.—Bowen.

Alteration of the Hands Caused by Prolonged Work with the X-Rays

Hallopeau and Gadaud showed the following case at a meeting of the French Society of Dermatology, July 3, 1902. The patient, a man of twenty-four, began the use of the X-rays in July, 1897. His work consisted in exhibiting the X-rays to the public, and he often used his hand as a subject for illustration. He had from eight to ten sittings a day, lasting from twelve to fifteen minutes, in which the hand was held in proximity to the Crookes tube from fifteen to thirty seconds. About three weeks after the first sittings, the skin of the hand that was exposed began to feel dry and to lose its hair. About a month later there began to be some desquamation and fissures appeared on the nails, which were more pronounced on the index finger. Soon after this the daily demonstrations were given up, but the use of the rays was continued in radiography for a period of five months. Graver symptoms then made their appearance in the following order: the nails became softened, and were shed, to reform in an irregular manner; a painful inflammation occurred at the nail fold, followed by suppuration; the pain became so great as to prevent the use of the hand; the hair fell partially on the right side of the head, and the eyes became sensitive to light. At this time the left hand began to be affected in a manner similar to what took place at first upon the right. The treatment consisted in the application of vaseline and lanoline, afterwards a mixture of lard and glycerine, without causing any amelioration of the symptoms. During the following year very little work was done and the inflammation disappeared almost completely, leaving the nails deformed. During a year spent in military service, the condition of the hands remained good; but soon after a new ulceration appeared on the first joint of the index finger after work with a hammer. This lasted for three months, with inflammation, pain, and suppuration. It should be said that after each inflammation of the joints, their movement became almost impossible. In the following year radiography was again taken up, but with precautionary measures, which was followed at the end of the year by the appearance of red patches on the back of the hand which faded on pressure. At the time of writing, the hands were in the following condition: on the right hand the skin over some of the fingers was markedly sclerotic and the articular furrows were obliterated; the middle and index fingers were attenuated, their circumference

being much diminished; and the whole hand had the appearance of that of a mummy. Over this sclerotic, shrunken hand there appeared a large number of small red spots which were small telangiectases of a red color. Some of these were isolated, but the larger number united to form a sort of net work. They disappeared upon pressure, but reappeared immediately after the pressure was removed. The nails were grooved, and some had disappeared entirely, leaving in their place only a thickening with pronounced hardening of the skin. The index and middle finger could not be flexed, although the joints appeared healthy, and the muscles to have preserved their action. The flexion was impeded by the sclerosis of the skin. The left hand was similarly affected, but to a much less degree. The process consisted of the scleroderma, with dilation of the small vessels, ulceration, malformation of the nails, and loss of hair. Attention is called to the occurrence of inflammatory attacks at a time when the subject was not exposed to the action of the X-rays, which indicates that the process set up by this agent remains for a long time latent.

[This condition, which simulates scleroderma, is seen not infrequently in cases of X-ray burns. The condition of telangiectasis also has been a very marked feature in several cases seen by the reporter. In one case that the reporter has seen these telangiectases were quite marked, although the skin otherwise was but slightly affected. The picture presented by these hands is remarkable, and calls to mind that seen in xeroderma pigmentosum. It should be noted also that there are instances on record of cancer succeeding these X-ray burns, as in a case reported by Doctor C. W. Allen, and in a case recently observed in Boston.—Rep.]—Bowen.

Trichophytosis Treated by the X-Rays.

At the same meeting of the Society, Gastou and Nicolau related their experience with some cases of affections of the hair treated by the X-rays. On account of the action of the X-rays in causing the hair to fall, it has been suggested to test this method in all parasitic affections of the hair follicles in which the elimination of the hair is an essential element in healing, *e. g.* trichophytosis, favus, sycosis, etc. In a case of sycosis of the beard, which had been in existence for five months and in which there was deep infiltration and induration about the follicles, the hair began to fall after the seventh sitting; and after two more sittings the pustules had dried up and most of them had disappeared. The infiltration disappeared little by little and the skin became soft. After thirteen applications the patient was completely healed. Not the least irritation of the skin or subcutaneous connective tissue was observed.

Their second observation concerns a man of forty with trichophytosis ectothrix of the beard and neck. The hairs began to fall after second sitting (more quickly than usual), and after the fifth sitting the face was perfectly well.

In the case of a child of four, who had a small spored-ringworm of the scalp, the hair began to fall after the seventh sitting. A slight desquamation followed, together with some hyperpigmentation. Treatment was continued, and after seventeen sittings the patient was considered well.

In another similar case, healing was affected after seventeen sittings.

A case of favus, which included almost the whole head and had been present for over twenty years without yielding to various attempts at treatment, showed a loss of hair after the eighth sitting. The treatment was kept up for four months, treating successively different areas, with the result that the active areas were eliminated and the surface of the scalp became nor-

mal. The new hair had grown in many parts, but there was still evidence that the disease had not been wholly removed.

From these observations they conclude that the fall of hair begins to show itself after from six to seven sittings, provided the method used by them is carried out. They think it probable that the special action of the X-rays is directed to the pillar itself. They think that used in the way they employ, there is no danger from this treatment. It is admitted that it has not been shown as yet that permanent epilation can be produced. In one case treated by Oudin there had been no apparent recurrence more than seven months after the cessation of the treatment.—Bowen.

Granuloma Trichophyticum. By P. Colombin. Dermat. Zeitschrift 1902, IX, 641.

This variety of ringworm was first described by Majocchi. A case of it is reported by P. Colombini in *Dermat. Zeitschrift,* 1902, IX, 641. Besides the usual lesions of trichophytosis capitis there were, specially on the anterior part of the scalp, small, round elevations and papules of nearly equal size which were arranged in chains and circles. Some of these stood so near each other as to form lines, while others were isolated. The isolated ones varied in size from a millet-seed up to a pea, some being as large as a ten-cent piece. Some were round and some flattened. On the left parietal region was a small dark crust where a papule had been that had softened, broken down, and discharged a little blood and a mass of yellow and red detritus. On the back of the head were single, large, sharply defined, slightly elevated collections of flattened, almost papillomatous form. There was also a large patch of ringworm in whose center was a prominent node of oval, slightly curved, form. The hair was off from all these efflorescences; there was no scaling; they were smooth and shiny. The color of the small lesions was pale, of the larger ones bright to dark red. Some were soft, some were firm. They were painless excepting on pressure.

Granuloma trichophyticum occurs most often on the scalp, but may occur elsewhere. The papules are formed of soft, yellowish red detritus mixed with blood,—epithelial cells, pus corpuscles, round bodies resembling spores. The principle alterations are in the deeper layers of the skin. They are new growths of the character of granulomas. The connective tissue has disappeared. The only parasite found is a trichophyton. In this form of ringworm the parasite penetrates into the deeper layers of the skin.

The treatment is very difficult on account of the extreme depth to which the parasite penetrates. The nodes have to be scarified, or curetted, before the application of antiparasitics.—Jackson.

Naftalan. By D. Auerbach. Monatschrift F. Prakt. Dermat., 1902, XXXV 357.

In 1896 Rosenbaum introduced this agent to the notice of the profession. It is a distillation product from crude nafta that is found in the Caucasus. It occurs as a thick fluid of dark green color, analogous to ichthyol but with a taste peculiar to itself. It contains 2 1-2 to 4 per cent. of soap. It does not mix with water or glycerine, but freely with fats. It is soluble in ether, chloroform, and benzine, but not in alcohol. It draws moisture out of the tissues and spurs them on to regeneration and to new activity; it constringes the blood-vessels and acts on their walls so that there is an increased emigration of leucocytes and an absorption of products of inflammation. By some observers an antiseptic and antiparasitic action is claimed for it, but this seems to be but

feeble. D. Auerbach [*Monatschrift F. Prakt. Dermat.*, 1902, XXXV, 357], from a study of all the literature on the subject, concludes that it is useful in all kinds of eczema and other inflammations of the skin where it does not irritate, and it is well borne by nearly all skins, and that it is an excellent agent for drying, for quieting pain and itching, for regenerating the epidermis, and for the promotion of the absorption of infiltrations. He recommends its use in the form of paste composed of 20 parts of naftalan and 10 parts each of oxide of zinc and starch, to which may be added 7 to 15 grains of menthol if there is much itching. This is to be applied two or three times a day. A bandage is unnecessary. He has found it most useful in moist stages of acute and chronic eczema, and in inflammations of the skin due to drugs externally applied. In chronic eczema with much infiltration it is necessary to use tar before using naftalan.—Jackson.

Antipyrin Dermatoses. By C. Berliner. Monatschft. F. Prkt. Dermat. 1902, XXXV, 137.

C. Berliner has found in the literature of the subject, and by personal observation, the following dermatoses from the internal administration of antipyrin, even in small doses. Bullæ; dark red, brown or slate gray macules; ulcers in the mouth; swelling of the lips; mucous patches; vesicular erythema; herpes labialis, and burning, infiltration and necrosis of the scrotum and penis.—Jackson.

Atoxyl—A New Arsenical Preparation.

According to W. Schild (*Dermat. Zeit.*, 1902, IX, 172) the preparation contains 37.69 per cent. of arsenic. It is a white, odorless powder with a slightly salty taste. It is soluble in warm water up to 20 per cent., of which 2 per cent. percipitates on cooling. It is 20 times less poisonous than arsenious acid, and its action is to a certain extent cumulative. Poisoning is shown by slight chilliness, dizziness, headache and itching of the neck, all of which pass away in a day or two. It is used by injecting it either perpendicularly into the muscles of the gluteal regions or hypodermically. The solution used is the 20 per cent. in water. On the first day two degrees of the Pravaz syringe is used, on the second four degrees, and so increased until by the fifth day the whole syringeful is injected. After the fifth day the full syringe is injected every second day. If any symptoms of poisoning appear the drug is to be stopped until they pass away, when it is to be used again. The dose may be administered every three or four days. It has been found useful in *psoriasis*, though not curative. Nine cases of *lichen ruber* have been cured—Jackson.

A Note Concerning the Histology of Pityriasis Rose of Gibert. By Sabouraud. Revue Pratique des Maladies Cutanées, Syph. et Vén, June 1902.

Sabouraud affirms that from a histological study of the typical adult lesions of pityriasis rosé, he finds near the limiting border of the patch a multitude of distinct minute vesicles containing in the midst of a serous liquid and fibrin, epithelial cells and migratory leucocytes. That these lesions are accompanied by a diffuse congestion and infiltration of the dermis. That they are covered not by scales but by crusts. These vesicles which have hitherto not been described, are formed by an inter-cellular disassociation of the epidermis which takes place

just under the surface of the epidermis, resembling somewhat the formation of the elementary lesion in psoriasis as described by Munroe, of Australia, and differing from the primitive vesicle of eczema which develops in the deep epidermic layers. From the fact that in the constituted vesicle of pityriasis rosé only the macrophages (Metchnikoff) are found, while the polynuclears (neutrophiles and microphages) are absent, he reasons that its non-parasitic nature is sustained. Since the rôle of the former is that of the absorption of toxic products and cellular debris, while the rôle of the latter is the phagocytosis of living microbes, he concludes that pityriasis rosé is not a pityriasis, that is to say, an essentially squamous lesion, but an erythema with minute vesicles. Hence pityriasis rosé of Gibert should be placed beside polymorphic erythema as a vesicular erythema from a cause yet to be determined.—A. D. M.

Notes on a Specimen of Tinea Microsporon of the Cat. By Leslie Roberts, M. D. British Journal of Dermat, Sept., 1902.

The author describes a very extensive transmission of ringworm from an Egyptian cat brought to England. Fourteen persons, ten of whom were children, a cat and a skye terrier were infected. In the cats the clinical appearance was that of bald patches, with desquamating surface and broken hairs. Microscopically the fungus was both endo- and ecto-thrix, chiefly in closely septated hyphæ. In the dog the patches were much more infiltrated with raised borders and differed very materially in clinical appearance from that of the cat. In the children the patches, mostly situated on the neck, were scaly with marked hyperæmia—resembling ordinary *tinea circinata.* There was no vesication. In three of the youngest children the scalp was affected. The scalp lesions appearing as small eaten-out holes in the cuticle with a free collar of horny epidermis. The hairs breaking off one or two lines above the epidermis. The fungi grew both within and around the hair forming a sheath of chain-like spores resembling the mosaic of the microsporon. His culture media contained no glucose or maltose. He considers the *chlamydospores* as food-storing cells rather than reproduction forms, and suspects a saprophytic existence before passing to the animal host.—A. D. M.

A Case of Ringworm of the Face and Two of the Scalp, Contracted from a Microsporon of the Cat; With Some Observations on the Identification of the Source of Infection in Ringworm Cases by Means of Cultures. By A. D. Mewborn, M.D. New York Medical Journal, Nov. 15, 1902.

The writer reports a case of scaly as well as circinate vesicular ringworm of the face, contracted from a pet kitten. A microscopical examination of the scales and downy hairs from the face of the patient showed a large-spored chain trichophyton and the rare form of a budding mycelium taken from the contents of a vesicle; while the hairs and a section of the skin of the kitten showed the ectothrix mosaic of small spores typical of the microsporon. On the same culture media the fungus from the two different sources gave absolutely identical growths. This growth on beer-wort agar, containing about five per cent. of maltose, was extremely rapid and at the end of two weeks presented concentric yellow and white bands with a marginal fringe having a *decided tangential inclination* to the left. These yellow bands are due to the development of large multilocular chlamydospores or reproduction forms. By means of these concentric bands, the chlamydospores and the tangential fringe, the writer was enabled to identify the source of infection from a cat in two other cases. The article has eleven illustrations.—A. D. M.

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EDITORIAL.

"THE MORAL ETIOLOGY OF SYPHILIS."

THE ancient conception of disease involved the idea of Divine punishment: disease was accepted as a retribution for sins committed by the bearer or his ancestors. This belief still survives in Oriental countries, and sufferers from disease visit shrines and holy places with the hope of gaining relief by expiation of their fancied sins. Somewhat akin to this idea is the more modern conception of disease as a punishment for the violation of Nature's laws—for which Nature is pitiless and inexorable in exacting the penalty.

At the present day the class of diseases comprehended under the general term, *venereal*, are the only diseases from which this moral etiology has not been eliminated. Many excellent people still believe that syphilis is a merited punishment for the sin of unchastity—unfortunately the offender against morality is not the only sufferer. Syphilis respects no virtue or social position; it falls upon the just as well as the unjust.

We cannot impute to Divine agency a disease which ruthlessly smites the innocent wife and her unborn offspring—neither can the infraction of Nature's laws be invoked in the causation of syphilis. The man who exposes himself to contagion in the ordinary, habitual way cannot be said to violate Nature's law—rather he may claim that he is fulfilling a law of his nature by the exercise of a physiological function.

The truth is that differentiation of diseases on an exclusively moral basis is an anachronism in the present state of our knowledge.

It would be interesting to trace the origin of the bad repute with which popular prejudice has always invested syphilis, and which still survives at the present day. It is contemporaneous with our earliest knowledge of the disease. The irruption of syphilis in Europe toward the close of the 15th century and its pandemic spread, which

was coincident with the decline and disappearance of leprosy, forms one of the most curious chapters in the history of medicine. In the 16th century thousands of leper houses in Europe were filled with syphilitics who inherited not only the asylums of the lepers, but also the dishonor in which this disease had always been held. The same spirit of intolerance and proscription which had characterized the treatment of lepers, was perpetuated toward the bearers of this new disease.

There is abundant evidence to show that leprosy and syphilis continued to be assimilated in popular prejudice during a long period. A curious excerpt taken from *Blackstone's Commentaries on the Laws of England* (12th Ed., 1794), appears in the last number of *Lepra*, which illustrates the association of the two diseases. "There are only three disorders which the law deems it scandalous to report that a person labors under, viz: the plague, the leprosy and the *lues venerea*." These three maladies in ancient times were so contagious and alarming that the person afflicted was obliged to be abandoned by his friends. "It is actionable to say a person has such a disorder, the infection of which may have long been removed."

At a later period, according to the chroniclers of the times, syphilitic patients, upon their entrance into the hospitals, were soundly cudgelled, and the castigation was repeated upon their discharge. The treatment itself, with the bleedings, the purgation, the sweating and mercurialization until the "virus of the disease was evacuated in floods of saliva," forms one of the most horrible pictures of medical practice.

Since then a more intelligent and more merciful mode of treatment has been substituted, but syphilis has not lived down its character as a shameful disease. It is still under the ban of ostracism. Syphilis is discriminated against and debarred entrance to our general hospitals during the period when it is acute and curable, and at the same time most dangerous as a source of contagion to others. As the writer has elsewhere said: "Practically the hospitals proclaim to this class of patients, 'We cannot receive you when your disease is acute and curable, but when your gonorrhœa has developed into stricture, salpingitis, peritonitis, or when your syphilis has affected important central organs, the brain, the spine, the organs of special sense, you may be received, but your disease shall be baptized under another name which does not offend the refined susceptibilities of our patrons.'" All mention of the syphilitic

origin of a vast number of diseases is vigorously excluded from the records as if it were a shame and a reproach.

The lay governors of the hospitals, rather than the medical staff, are responsible for the impression that it is almost as disgraceful to treat syphilis as it is to contract it. But it cannot be said that the medical profession is entirely free from this popular prejudice. Many medical men consider it beneath their professional dignity to occupy themselves with the study or treatment of acute syphilis; they would resent it as an imputation upon the character of their medical practice.

Syphilis stands without the pale of official recognition by our health authorities and the application of sanitary methods for the prevention or control of contagious diseases. The *great pox*, which is a thousand times more dangerous to the health of the community than smallpox, *officially*, does not exist.

The practical bearing of the foregoing considerations upon the important problem of the prophylaxis of syphilis is evident. The trend of modern medical progress and effort is essentially in the direction of the prevention of disease. One of the most significant signs of the times is the general awakening of the interest of the profession and the public to the important relations of syphilis to the public health and its significance as a social plague.

The Second International Congress for the "Prophylaxis of Syphilis and Venereal Diseases," held at Brussels during the past year, was participated in, not only by the most distinguished specialists in Venereology from all countries, but by representatives of the law, the clergy, sociologists, and civic authorities. While no concerted plan of action was formulated which could be considered universally applicable for the repression and control of prostitution, the chief source of these diseases, yet there were certain measures unanimously recommended which promised to be practicable, efficient and immediately available in checking their spread.

In the application of these measures, which comprised chiefly education and treatment, the most serious obstacle encountered inheres in the very nature of the diseases themselves. Largely on account of their shameful and secret character, the general public cannot be educated to their dangers, their modes of contagion and the duration of their contagious activity, and for the same reason sterilization by treatment cannot be effectively employed. Can any one doubt that if a campaign of education which has been so successfully employed in the prevention of tuberculosis could be instituted against

syphilis; if the youth of the country, upon whom the incidence of the disease most heavily falls, could be instructed as to its dangers, modes of communication and if, as in the case of tuberculosis, enlarged facilities for treatment could be provided which should be unrestrictive and adapted to the private nature of the disease, that its spread would be materially circumscribed. Every infection avoided by enlightenment, every source of contagion sterilized by prompt treatment represents a distinct diminution of morbidity.

Unfortunately the ordinary channels of communication with the laity are closed to the diffusion of knowledge respecting this disease. The shameful character of syphilis renders it a forbidden topic. It is from a lack of this knowledge that the popular conception of syphilis is that of a disease exclusively confined to an obnoxious class or their consorts,—that it is a disease of debauchery and carries with it the stamp of licentious living. The truth is that the immense majority of the victims of syphilis are the young, the inexperienced, and the irresponsible through ignorance. A long series of exposures is not necessary to contract syphilis—it often results from the first step in the path of dissipation.

The consideration that should appeal to the humanitarian element in society is that syphilis embraces among its victims a vast number of virtuous wives and innocent children; that its morbid irradiations are not confined to the family, but ramify through society at large in various industrial occupations and professional relations. The classification of such infections in the category of *syphilis insontium* does not take away the sting of shame which to the virtuous woman is often the worst feature of the disease.

The mission of the medical profession is to inform and direct public opinion in all matters relating to disease and sanitation—especially should the public be educated to a recognition of the fact that syphilis is not the *scarlet letter* which proclaims immorality, but that a vast number of people contract the disease accidentally or through relations which society sanctions as eminently respectable and even virtuous. While these innocent victims cannot escape the individual risks of the disease, they should not be compelled to bear the added burden of shame and reproach which now attaches to it.

P. A. M.

THE HISTOGENESIS OF SCALES AND CRUSTS.*

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Translated by A. D. Mewborn, M.D.

THESE two words, scales and crusts, are constantly used by dermatologists and yet how few physicians there are who understand their essential structure and the mechanism of their genesis. In all sciences, fundamental ideas should be the first objects of study and teaching, and yet these are always the ones most neglected. If I may be pardoned in taking up the study of a subject so simple, those who have the patience to follow me will perhaps admit that I have not been altogether wrong in choosing it.

The Scale.—Ask a practitioner what is his idea of a scale and he will doubtless reply that it is the visible moulting of the skin, under an abnormal overproduction of the normally exfoliated layer of the epidermis. This reply, true in a few cases, would contain only a part of the truth in the vast majority of cases. The scale so defined is the scale of ichthyosis. But outside of ichthyosis, which is rather a malformation than a disease, I know of no squamous epidermic disease in which the scale is formed by this mechanism alone; *i. e.*, by the sole process of the exaggeration of the normal exfoliation of the horny layer. And to mention a few examples, neither the scale of pityriasis, nor that of psoriasis, nor that of eczema, is formed by this mechanism. In order to understand better the essential structure and the histo-genetic process which gives birth to the scale, it is necessary to understand the crust. And upon this subject the same prejudices, the same reasoning *a priori*, are encountered as in regard to the word scale.

The Crust.—If any dermatologist should demand of his students a definition of a crust, each student would probably take the following line of reasoning: a crust is not *ab initio* a crust, but is formed by the external coagulation of the fluid exuded through an abrasion in the cutaneous covering. So from this it seems that the definitions of the scale and of the crust are opposed one to the other. A scale then is produced locally by the exfoliation of the superficial layers of the epidermis, while a crust is formed from the effusion at the surface of the skin of a fluid (from within) and its concretion externally. And if, seeking to render the definition still more precise, you demand what is

*This article was contributed by Dr. Sabouraud especially for the January number, but arrived too late for publication.—A. D. M.

this coagulable fluid, he will reply—serum. Such are the elementary ideas on this subject, and they are wrong, for the following reasons:

It is rare, indeed, that the scale is formed exclusively of the keratinized layer of the epidermis. On the contrary, almost always the scale, or that which is called the scale, participates in the structure of a crust, in that it is produced not only by exfoliation, but by *effusion,* as in the crust. This effusion, which makes a part of the scale, is only recognizable under the microscope. Therefore, I repeat, very few scales are the exclusive products of desquamation. Most scales are the products of both effusion and desquamation and are *scale-crusts.* If then we wish to understand the mechanism of the ordinary scale formation, we must study first that of the crust.

At the outset, it must be observed that the crust is not constituted solely of coagulated serum, but is almost always composed of one or more layers of keratinized epidermis, as in the case of the scale, and may also contain pus.

Take for example the crust which terminates the evolution of the orificial follicular pustule of the impetigo of Bockhart, and we see this little pustule originate in the form of a small greenish-yellow cupola filled with true pus. These pustules, without opening, dry up and become transformed *in situ* into a lenticular or discoid crust, which falls off in a single piece when the lesion heals. This crust will contain all the elements of the primary lesion from which it was formed; i. e., layers of horny epidermis at the surface and pus in the deeper portion. The crust then is just as much a result of the external coagulation of exuded pus as of serum. Thus we reach by simple clinical observation a true and precise definition. The crust is formed by serum, leucocytes and keratinized layers of epidermis. It is now necessary to study the mechanism by which the serous and leucocytic exudation is joined to the epidermic exfoliation to form the scale as well as the crust.

I. EXOCYTOSIS—("EXOCYTOSE").

It would be ridiculous to pretend that there was anything new in the study of the migration of leucocytes through the epidermis. After the discovery of diapedesis by Cohnheim, Langerhans found these leucocytes in the epidermis and took them for the intra-epidermic terminations of the nerve fibers. Since then, the cellules of Langerhans have been identified as leucocytes with tri-lobed nuclei (Ranvier). And now this phenomenon of the migration of leucocytes in the epidermis is known to all histologists. Everyone knows that all the suppurations

of the epidermis in acne, in the impetigos, in all the adventitious epidermic suppurations in the group of eczema, etc., are produced by the afflux of migratory cellules at the point where they will produce the pustule. I have particularly studied this phenomenon in a work upon the defensive reactions of the skin against microbes.[1]

It is not this phenomenon of leucocytic afflux creating the pustule which I wish to study here, but a phenomenon of the same order, much less generally understood. I shall call it "EXOCYTOSIS," and it may be defined as follows: "*Exocytosis*" is *a transmigration of leucocytes through the entire thickness of the epidermis which are poured out upon the skin at its surface, or at the level of the horny layer.* This occurs in diseases which dermatology in nowise classifies among the erosive or exudative diseases, and in which even under the microscope the erosive epidermic lesions are absolutely superficial. This phenomenon was first described, I believe, in a work coming from my laboratory in 1898, in a "Study of the Elementary Lesion of Psoriasis," by W. J. Munro, of Sydney.[2]

It is a phenomenon that I have found many times since. It exists especially in almost all squamous states, and in many circinate erythemas, of which pityriasis rosea of Gibert is the best defined clinical type. Finally it is easy to find many other examples in the parasitic pityriasis of mycotic origin ("teignes mycosiques").

I wish to bring out clearly this phenomenon of *exocytosis* in the formation of the ordinary scale. No preparation could be better chosen than the sections represented in Fig. 1 and Fig. 2. These represent, under two different powers, a vertical section through the scalp at a point attacked by ordinary trichophytosis. At first glance one sees simply a section of epidermis filled with migratory leucocytes, but after considering the preparation under a low power (Fig. 1), or in detail (Fig. 2), it is easy to understand the mechanism of this migration (Fig. 2).

The leucocytes, emigrated from the derma, can be seen to have mounted vertically in the epidermis until they have arrived on a level with the surface. This occurs, not at a single point to form a small superficial abscess (psoriasis), but upon a large area, so as to throw outside of the epidermis, *at the surface*, a froth ("*ecume*") of continually renewed leucocytes. In certain points (a) one may see this afflux beginning, and when there is yet no accumulation of cellular

[1]Sabouraud. Annales de dermatologie, 1899, p. 729.

[2]W. J. Munro. *Note sur l'histo-pathologie du psoriasis.* Annales de dermatologie. 1898, p. 961.

exudate on the surface. At other points, on the contrary (b), where this cellular omission has continued for some time, a complete scale-crust has been formed at the surface of the skin. At the precise point indicated at (b) are seen stratifications of leucocytes alternating with keratinized epidermic cells, forming a felting, which above the point (b) constitutes the scale-crust. The characteristic of this *exocytosis* is the leucocytic exodus on the surface, or the effusion on the surface of the skin of a number of living and mobile cells. All histologists, I repeat, recognize this leucocytic afflux in the epidermis which forms an abscess, and which will produce abscess in whatever tissue it occurs. But that which is not known, or at least imperfectly understood, is the *exocytosis;* the effusion at the surface of the skin of a mass of migrated cells.

It is particularly interesting that this phenomenon which I describe is known to occur on the surface of mucous membranes. If a person gets a straw or a grain of dust in the eye, he will throw it off two hours later in the form of a small white glairy mass. If this mass is carefully examined, it will be found to consist of an agglomeration of white cells enclosing the straw or grain of dust. It is well known with what rapidity any ulcerations of the mouth become covered with a greyish-buff coating, which is a fibrinous clot filled with leucocytes formed by *exocytosis*. Finally the thesis of Cantacuzène[3] affirms that the same perpetual leucocytic effusion takes place at the surface of the intestinal mucous membrane and that in the course of digestion or of local infections a large amount of digestive débris or of microbes is absorbed at the mucous surface of the small intestines by the white globules which have come in numbers through the mucous membrane into the cavity of the intestinal tract by *exocytosis*. By far the larger number of these leucocytes are lost to the individual, but a certain number return in the reverse sense into the lymphatic and sanguinary circulation of the mesentery, retracing their way through the entire mucous membrane.

That which is new in what I describe is the existence of this process of *exocytosis* in the cutaneous lesions. This process is so common that it may be considered almost the normal life of every skin. It exists in the most ordinary, superficial and insignificant lesions, such as the simple pityriasis of the scalp—in the dry or oily "dandruff" of which almost every head presents a trace. *Exocytosis*, then, is a histo-pathological process well known on the surface of mucous membranes and

[3] *Jean Cantacuzène.* Recherches sur le mode de destruction du vibrion cholérique dans l'organisme. (Paris, G. Steinheil, editeur, 1894.)

equally common on the corneous surface of the epidermis, and enters into the formation of the scale in nine out of ten squamous affections of the skin.

Figure 3 and its enlargement, Fig. 4, are even more expressive in illustrating this phenomenon of *exocytosis* than the preceding. As in the preceding case, this section has been made through a patch of trichophytosis of the scalp; great care being used to retain the scales covering the patch. These scales are composed of an agglomeration of leucocytes, which are closely packed and almost enclosed (at b) by layers of hyperkeratosic horny cells (Fig. 4). Underneath this crust (at a) the process of *exocytosis* is beautifully shown. At c is shown a transverse section of a trichophytic hair, the cause of all these phenomena; one sees also in the derma, below the diseased epidermis, an increase in the number of fixed and mobile cells. Many of the latter are destined in their turn to be effused outside the epidermis. In order to sum up all the points shown in these sections I will repeat it:

Upon the lateral border of the funnel-shaped opening of the hair follicle, inhabited by a trichophytic hair, there takes place a leucocytic exudation capable of creating alone the mass of crusts existing at the surface of the skin, which a superficial clinical observation would consider as dry scales. This *exocytosis*, this leucocytic exodus, is furnished by a mass of cells which infiltrate the derma and epidermis. From these facts, shown by these examples, and of which I have hundreds of others in a number of epidermic diseases, the conclusion is reached that this phenomenon is extremely frequent in all superficial inflammations of the skin, even the most trivial, and that it attains by its frequency and the constancy of its occurrence to the importance of a title as a *general reactionary process of the epidermis*. And it is for this I have described and named it *exocytosis*.

PATHOGENESIS OF EXOCYTOSIS.

It is much easier to explain *how* this phenomenon occurs than *why*. It is now fairly certain that the migratory cells are not passively poured out, but that they advance towards the surface of the skin *proprio motu*. According to the verified doctrines of almost all parasitic diseases, these leucocytes advance to the site of traumatism created by a parasite or to the place where the parasite emits its toxines. According to the theory so patiently and brilliantly established by Metchnikoff, and now generally accepted, the leucocytes arrive as near as possible to the parasite in order to envelope and digest it (phagocytosis).

But what we see here only partly agrees with the idea of phagocytosis as ordinarily understood. For this leucocytic efflux at the surface, "*en nappe*," often is produced (b in Fig. 2) where no local infection, mycotic or microbic can be demonstrated, but at quite a distance from the nearest trichophytic hair. It is evident that the leucocytic exodus is not directed in a precise and definite manner to the infected point such as should be the case if the phagocytic theory were absolutely invariable.[4]

In other words, the reasons for this exodus of leucocytes are not known. It may be observed in diseases in which, until the present, no microbes have been revealed—psoriasis. Are there other causes for this leucocytic exodus to the surface than the positive chemiotaxis exercised at a distance by a parasite on the surface of the skin? This is possible. It is well established that the white globule is attracted not only by parasites and their toxines, but by traumatism, even of a chemical nature, as Metchnikoff has perfectly demonstrated when he cauterized the tail of a triton or tadpole with a nitrate of silver stick, and saw produced under his eyes this afflux of leucocytes at the point injured. So without putting at stake the question of microbic toxines, any traumatism—microbic, mycotic or even mechanical, such as scratching—may provoke a point of *exocytosis*.

In these microbic epidermic affections, in order that the purgative rôle of the leucocyte should be complete, it would be necessary that the leucocyte, exuded through the epidermis, should seize a fragment of the parasite and return through the skin into the lymphatic or vascular circulation. And this retreat, which has been seen to take place in the case of the white globules transuded into the intestinal cavity,[5] is perhaps possible to some extent in the epidermis. When in a section of the epidermis one finds a compact "swarm" of leucocytes, no one can deny the possibility of a few, among the crowd of ascending leucocytes, retreating from the surface to the depths. Nevertheless, the mass of leucocytes forming the scale shows that the greatest number perish at the surface, and remain imprisoned in the horny layers, like stratifications of silex between layers of chalk. We must consider then the cutaneous *exocytosis* as the realization at the surface of the skin of a phenomenon common to all the mucous surfaces—conjunctival, nasal, intestinal, etc.; but while the white globules may, even

[4]The objection may be made that any secondary infection, staphylococcic for example, would attract the leucocytes to the surface. But the invariably negative results in culture from these scales show that all bacterial infection is foreign to their genesis.

[5]Cantacuzène, *loc. citat.*

PLATE VI.—To Illustrate Dr. Sabouraud's Article.

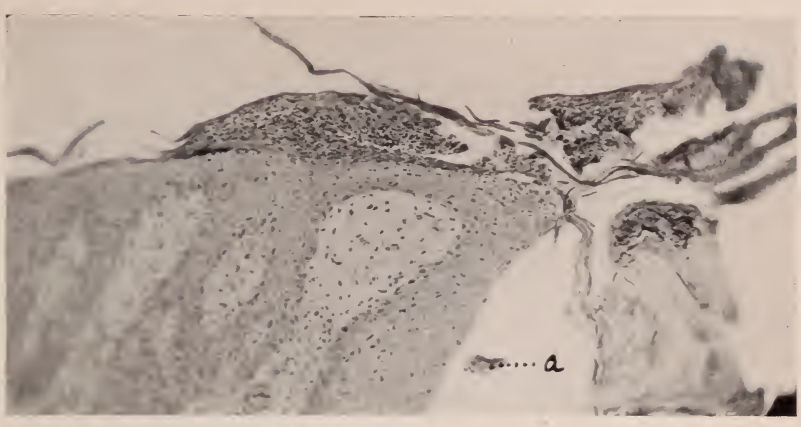


Fig. 1.

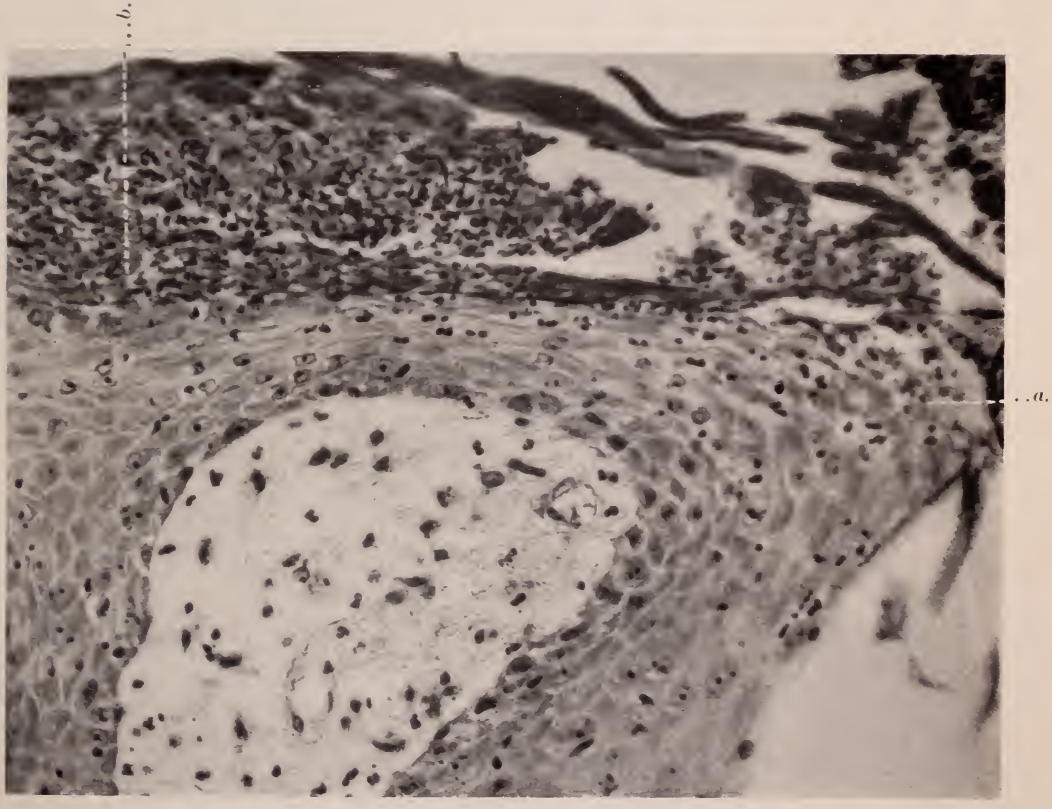


Fig. 2.

Fig. 1. Trichophytosis of the scalp. Vertical section through a scale. (X 180 diameters.) *a*. Oblique section of a trichophytic hair.

Fig. 2. Trichophytosis (endothrix) of the scalp. Vertical section through a scale. (X 720 diameters.) *a*. An epidermic spur at a level with the orifice of a hair follicle. Taken at the time of an effusion of leucocytes. *b*. Scale already formed by the alternate layers of effused leucocytes and horny layer cells of the epidermis.



Fig. 3.

Fig. 3. Trichophytosis of the scalp. Vertical section through a hair follicle and a scale. (X 150 diameters.)



Fig. 4.

Fig. 4. Trichophytosis (endothrix) of the scalp. Vertical section through the hair follicle and scale. (X 600 diameters.) *a*. Leucocytic effusion at the surface of the epidermis. *b*. Scale-crust formed by thousands of nuclei of effused leucocytes. The scale is enveloped by a layer of horny epidermis. *c*. Oblique section through a trichophytic hair enclosed in the epidermic wall of the hair follicle.

after completely traversing the mucous membrane, retreat in the inverse sense, the greater number are unable to return through the epidermis, at the surface of which they die. A phenomenon which renders this return of the white globule most difficult is the perpetual ascent of the deep layers of the epidermis toward the surface. Not only does this perpetual rising tide throw off these adventurous leucocytes, but the keratinization of the superficial layers below the transuded leucocyte renders retreat extremely difficult. The power of this mechanism of *eviction* may be understood by studying the crusts at b., Fig. 2. One sees the nuclear vestiges of leucocytes flattened and crushed by the successive layers of keratinized cells as if by the jaws of a press.

II. EXOSEROSIS ("EXOSEROSE").

The second phenomenon to be studied, on account of its contributing to the formation of the scale and of the crust, although well known, must be considered under a different aspect from usual. This phenomenon I shall call "*exoserosis*," and it is in substance *the exudation through the epidermis, and at its surface of a serous liquid coming from the derma.* That which Unna, of Hamburg, has called the "spongy state" (spongiose of E. Besnier), is the aspect of this phenomenon best known to histologists. It is the serous inundation of the epidermis, separating the epidermic cells and creating between them a passage for the serum exudated. The serum disassociating and flattening by excentric pressure the epithelial cells between which it spreads, creates the serous vesicle (such as that of eczema for example) by the same original mechanism as the *spongiose* of Unna and *exocytosis*. So the serous afflux in the epidermis may either produce a uniform œdema at a certain point in distending equally the infiltrated intercellular spaces, or by driving back form a vesicle. But there remains another outlet for the serum to "fuse into a lake" just below the horny layer and there concrete into a solid mass. This latter process is particularly the one I would call *exoserosis*, because it is homologous to that of exocytosis, which we have just studied, and because these two synchronous processes form the greater number of crusts which, in the clinic, are called scales. I will show here a drawing from the excellent thesis of my pupil and friend Dr. DuBois, at present chief of the dermatological clinic at Geneva.[6] It is a figure drawn by him with the camera lucida and shows the epidermis of the

[6]Chas. Dubois. *Pathogénie et histologie de la squame dans les teignes tondantes.* (Henri Kündig, Editor, Geneva, 1902.)

scalp affected by trichophytosis at the moment of *exoserosis* (Fig. 5). Here one may see, shown to perfection, a slender stream of serum leaving the summit of a papilla and the central vessel which occupies it (P), to make the ascent into the epidermis. Here and there, where the cells are less intimately united, the serum, expelled under pressure, tends to increase this disassociation and makes between them the rudiment of a vesicle,—a serous lake (Sp). Its last resting place is under the horny layer, but to-morrow the underlying epidermic layer will be keratinized in its turn, and the serous lake will be by this act transported outside the epidermis. It will become a part of the crust at the point Sp′ is to-day. This *exoserosis* may give rise in the epidermis to the most varied figures. One of the most common is the suffusion of a serous "nappe" under the horny layer, disassociating without breaking the epithelial cells between which this effusion has taken place. Then these epithelial cells, flattened, drawn out, "meniscoid," with their nuclei almost unrecognizable, from the mesh of a network bathed by the effused serum. This serous effusion hollows out spherical spaces between the flattened epidermic cells and naturally when the serum coagulates, these rounded serous blocks give a most characteristic appearance to the crusts formed by exoserosis (Figs. 7 and 8). The crust on vertical section may be compared to a wall built on round pebbles of different sizes held together by cement. The cement would be the disassociated epidermic cells more or less imperfectly keratinized.

THE PATHOGENESIS OF EXOSEROSIS ("EXOSÉROSE").

Although the phenomenon of exoserosis is frequent, its cause is even more imperfectly understood than that which determines leucocytic exodus. The lesions of "spongiose" and "exoserosis" may be found in impetigo contagiosa as well as in prurigo.

It is difficult to explain the immediate cause of this phenomenon as it is observed in lesions known to be parasitic as well as in non-parasitic "toxidermies." In his thesis DuBois considers exocytosis (which he calls "*diaphorose*"—from *διἄφορεω* to traverse) as a natural process of direct resistance to the microbe, the infectious agent itself; while he considers the serous exudation, under all its forms, as the means of expulsion of the toxic products secreted by the microbe or existing in the organism. I shall not take the time to discuss this hypothesis, rational enough but still subject to criticism. I only wish to say that in any epidermic traumatism, but especially in a

burn, this intense *exoserosis* may be seen to take place; consequently if the *exoserosis* may be due to an anti-toxic reaction, it may also be caused by any violent traumatism of the intra-epidermic nerves (the phlyctenule of a burn).

III. HYPERKERATOSIS.

In order to complete the study of the scale and of the crust, it is necessary to study the skeleton or the scaffolding of their formation. This I will do briefly. In studying a section of the skin, the fact must be constantly kept in mind that all these cells, surprised and fixed in a moment of their activity, would not be found in the same places if the same piece of skin should be taken a few hours later. Because the mass of epidermic cells are animated with a constant ascending movement. To-day the *exoserosis* conducts the serous droplets to the level of the corneous layer. To-morrow they will be concrete and will form an elevation at the surface of the skin. The day after to-morrow a new corneous layer will be formed under them and we shall have a scale or a crust constituted essentially in its center by coagulated blocks of serum clothed on its two surfaces by thick corneous layers (Fig. 5).

The same may be said for *exocytosis*. Between two layers of the horny cells, one forming the roof, the other the floor of the scale, we have a collection of imprisoned leucocytes. I have insisted elsewhere upon this perpetual eviction of the most superficial layers of the epidermis as the most constant and the most active defense of the skin against parasitic traumatism.

SCALES OF MIXED ORIGIN.

It goes without saying that the processes which we have just studied may be observed conjointly or one without the other. A scale or a crust may be formed in certain parts by the simple phenomenon of *hyperkeratosis*, or by *exoserosis*, or *exocytosis*, or by the combinations of *exoserosis* and of *exocytosis*. I will give another example taken from the pathological anatomy of ringworm of the scalp in children (Fig. 6).

Around a trichophytic hair all three processes may be seen. At the right of the infected hair (trichophytic) a corneous elevation is formed at b, composed of simple hyperkeratosis. At c, on the contrary, is a block of coagulated serum, which at this moment detaches itself from the skin under form of a crust with a corneous layer above

[1]*Sabouraud.*. La defense de la peau contre les microbes. *Loco citato.*

and below; while at d to this process of exoserosis is added that of exocytosis, and the exfoliated crust is composed of horny layers, serum and dead leucocytes.

TRICHOPHYTOSIS FURNISHES A MEANS OF STUDYING THE GENERAL HISTOLOGICAL REACTIONS OF THE SKIN.

All the preparations which precede have been furnished by a histological study of ringworm of the scalp. This exclusive selection has been for the following reasons. Trichophytosis, from the nature and certainty of its cause, by the facility with which the histology of its lesions may be studied, by the ease with which it may be reproduced experimentally, is evidently destined to play a rôle in the cutaneous histo-pathology similar to the rôle played by anthrax in the study of general infectious diseases.

But it is quite remarkable that the thesis of DuBois, of which I have already spoken, is almost the only work which has appeared on the pathological anatomy of trichophytosis. There have even been authors disdainful enough to write, that the pathological anatomy of trichophytosis showed nothing of interest. On the contrary a more polymorphic disease could scarcely be selected for study than this "maladie d'étude." There are scales, crusts, erythema, vesicles, pustules, and suppurating folliculitis, giving in each lesion the type of the parasitic scale, vesicle and pustule of an external origin.

Considering that, for a large number of cutaneous diseases we see counterposed two pathogenic theories, one affirming their parasitic nature, the other their internal origin; while we do not know absolutely the immediate cause of any cutaneous disease of importance; while we are ignorant of even the direct cause of eczema and of psoriasis, to mention but two examples; it seems of the greatest utility to study in detail the lesions of a cutaneous disease, whose external, mycotic cause is doubted by no one.

With this disease we have an unquestionable type of the scale, crust, vesicle, and pustule, of a parasitic origin. Nevertheless, it would not suffice to find lesions analogous to trichophytic lesions to declare that the disease was of a parasitic origin. But there would be a strong presumption in its favor, and all contrary affirmations would be strongly suspected of error. Chas. DuBois has then been the first to put the plow to an immense and fallow field, whose culture promises an ample harvest.

After the study of the scale and crust, it will be necessary to study

the vesicle and pustule, at present under investigation in my laboratory and which already promise fruitful results.

HISTOLOGY OF THE "STEATOID" SCALE OF PITYRIASIS.

The objection may be made that the examples of *exocytosis* and of *exoserosis*, which I have given above, are only of value in scales or crusts of pityriasic conditions due to the trichophyton, and that I have no right to conclude from them as to the general relations of the epidermis. I will reply to these objections and terminate this present study by comparing the scales of trichophytosis with the oily scales of ordinary pityriasis of the group which Hebra has called "*seborrhœa oleosa*,"[8] and which served Unna as a basis on which to create his "*eczema seborrhoicum*" (Fig. 7). In this section of a scale under a low power, one may easily distinguish between the successive sheet-like layers of the horny epithelium, droplets of exuded and coagulated serum which have arrived by *exoserosis*. Under a much greater enlargement, the center of this preparation shows us (Fig. 8) below the débris of scales of earlier date filled with microbes, two drops of serum coagulated in the center of the scale and filled with leucocytes which have come to the surface of the skin by *exocytosis*. And the entire scale is formed by the triple process of *exoserosis*, *exocytosis*, and of *hyperkeratosis*, conjointly and simultaneously effected.

The interest of these two last figures is considerable; first, because there does not exist to my knowledge any precise section showing the complex mechanism producing the scales in "steatoid" pityriasis (corona seborrhoica, seborrhœa corporis of Duhring, etc.), and which these two figures establish. Second, because no one has ever called by the name of crusts these scales of pityriasis capitis, not even when these scales are fatty or oily. No objection can then be made to this study for giving the histology of the crust, for that of the scale. These are the *clinical* types of the scale. Nevertheless, their structure shows that they are produced not by a simple process of *hyperkeratosis*, but by the complex process which makes crusts. These preparations then, outside of their particular interest, go to establish the generality of the processes of *exoserosis* and of *exocytosis* which we have just studied.

[8] This name is bad and should not be preserved. In the sense that Füchs, of Göttingen, first used the word *seborrhœa* in creating it; seborrhœa is never squamous, but is the "acné sebacée" of the old French authors. (See on this subject: Sabouraud, *Seborrhee, acne, calvitie*, Paris, 1902. Masson, Editeur.)

CONCLUSIONS.

I do not wish to exceed the limits which I have assigned myself in this study to establish the facts which I have done, *i.e.*, that the morbid cutaneous reactions are of an extreme simplicity and that the common morbid type of the squamous epidermic disease does not vary to any great extent. What I wished especially to show was that among the processes which go to make the scale of the usual histological type, that is to say the *scale-crust*, the process of hyperkeratosis is a reactional phenomenon of the second order. The two processes which form this scale and this crust are the *exhalation* at the surface of the skin of a serous "*tide*" and of a leucocytic "*scum.*" These are the first two phenomena in its production. As to the hyperkeratosis which covers the scale-crust with a corneous layer, it is a secondary reaction of the epidermis to the *exoserosis* and *exocytosis* once they are produced.

So these two phenomena of *exoserosis* and of *exocytosis* dominate the formation of the scale in general[9] as that of all crusts from whatever cause they may be derived. These are the fundamental reactions of the epidermis and it is not permissible to ignore them.

[9]Exception is made of the scales of simple pityriasis capitis (dry scales), and of ichthyosis in general which are exclusively produced by *hyperkeratosis.*

Fig. 5.

Trichophytosis of the scalp. Vertical section through a dermic papilla with serous infiltration of the epidermis above it. *P.* Central papillary vessel. *Sp. Sp.* Serous "lakes" united by a visible canal at the summit of the papilla. *Sp'.* Serous crust being expelled.

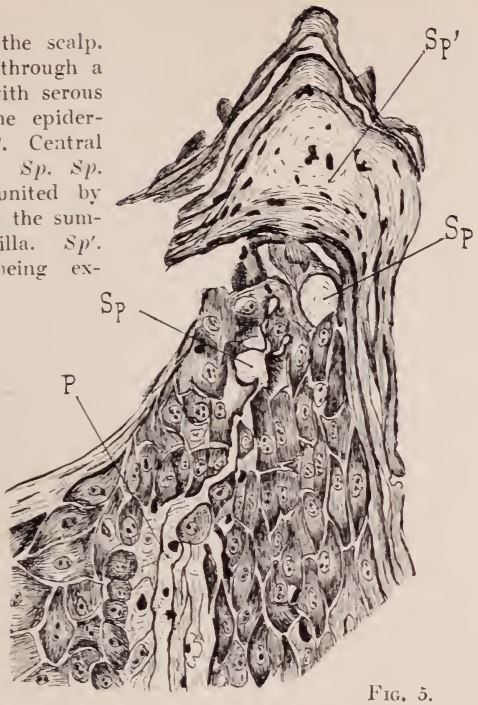


Fig. 5.

Fig. 6.

Trichophytosis of the scalp. Vertical section of a diseased hair surrounded by a squamous collarette. (Preparation of Ch. Du Bois.) *a.* Hair infiltrated with mycelial spores. *b.* Hyperkeratosis covering the summit of a lateral epidermic spur at the mouth of the follicle. *c.* Crust formed of serum (exosérose) between two layers of horny epithelium. *d.* Scale formed of serum and the nuclei of leucocytes (exocytose) between two layers of horny epidermis.

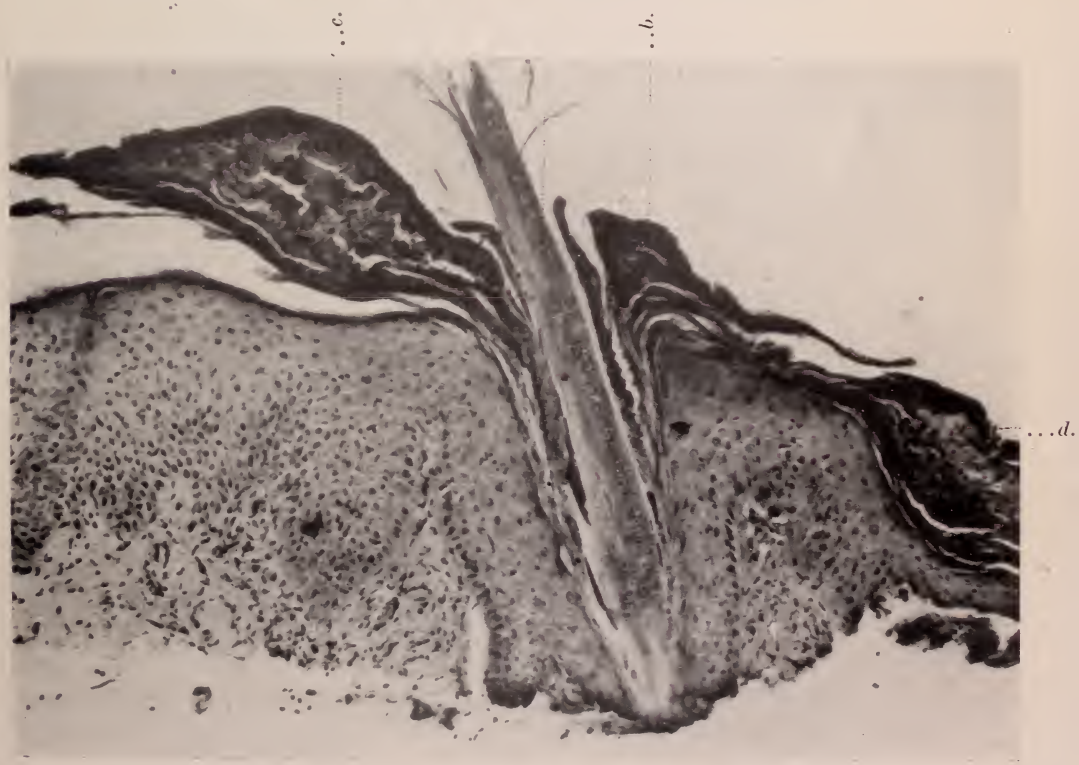


Fig. 6.



Fig. 7.

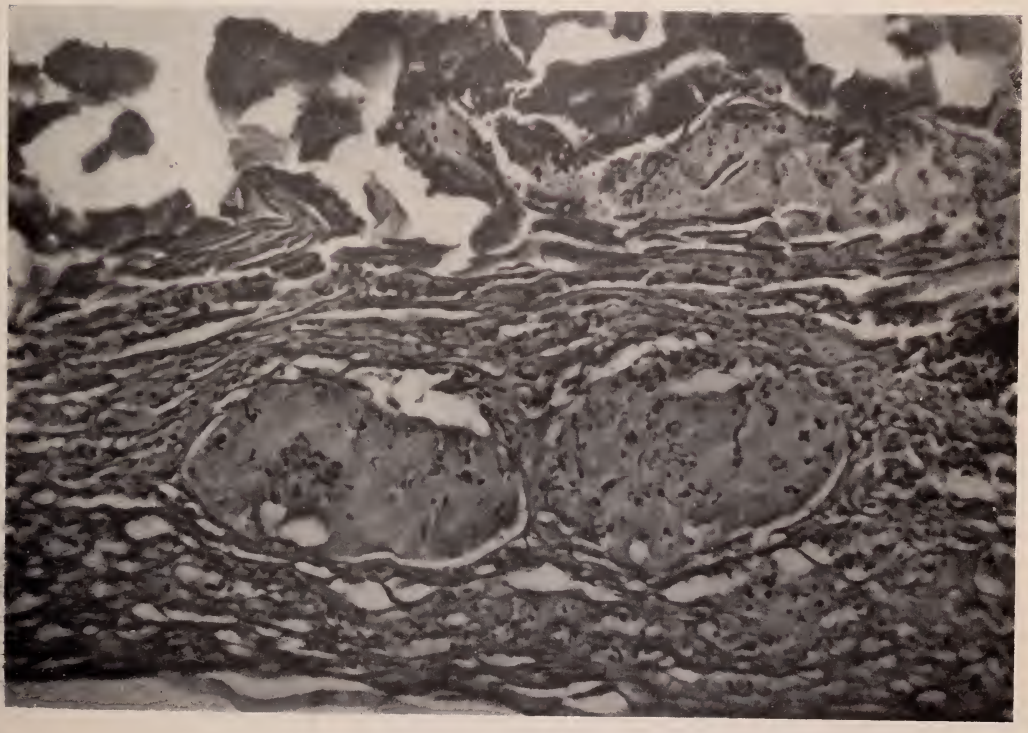


Fig. 8.

Fig. 7 Scale of simple pityriasis of the scalp (steatoid scale). Vertical section. (X 40 diameters.)

Fig. 8. Scale of simple pityriasis of the scalp (steatoid scale). Vertical section. (X 600 diameters.)

NOTE ON THE HISTOLOGY OF HERPES ZOSTER.

By S. Pollitzer, A.M., M.D., New York.

(Read at the meeting of the American Dermatological Association, Boston, September 18, 1902.)

I DESIRE to call to your attention a peculiar variation in the anatomical seat of the vesicles in herpes zoster. Clinically, the case in which this variation occurred, presented nothing at all indicative of the histogenetic peculiarity. The patient was a young man on whose left shoulder and arm there were three perfectly typical herpes groups, each made up of from five to fifteen vesicles. The smallest of these groups situated on the outer side of the middle of the upper third of the arm was excised and examined.

Before describing the specimens, permit me to recall for a moment the picture ordinarily presented in zoster,—such a picture as that shown in Fig. 1 from a case of zoster costalis. You see a cutis moderately infiltrated with round cells, along the lines of the blood vessels, and a rete in which, in a circumscribed region, there is a peculiar degeneration resulting in the formation of a characteristic multichambered vesicle filled with sero-fibrinous fluid, and containing leucocytes and epithelial cells, many of which show peculiar degenerative changes which have been the subject of much discussion, and which need not detain us here. The changes in the rete begin in the lower tiers of cells and the roof of the vesicle is formed by the horny layer, the entire vesicle lying within the rete.

The degree of small-cell infiltration in the cutis varies in different cases quite independently, I have noticed, from the clinical symptoms of inflammation. In some cases, apparently mild, I have seen the cutis the seat of an infiltration extending with interruptions from the hypoderm to the epidermis, and involving most markedly the coil glands, the pilo-sebaceous apparatus and the papillary and sub-papillary layers. On the other hand I have seen cases of severe confluent and hæmorrhagic zoster in which the infiltration seemed disproportionately small and was almost limited to the papillary layer. It would seem from this observation as if the small-cell infiltration were the direct effect of the primary lesion of the disease—be it nervous or vaso-motor—rather than the reflex and secondary effect of the lesion in the epidermis.

However this may be regarded, the view that the primary or central lesions of zoster may manifest themselves in different cases by changes

in different layers of the skin, derives an interesting corroboration from the specimens which form the subject of this note. A cursory examination of the sections showed vesicles clearly enough, but the closest scrutiny failed to disclose any of the usual changes in the Malpighian layer of the surface. The vesicle was found to lie in every case directly over the orifice of a hair follicle. Its roof was formed of a thin layer of the stratum cornuum, its contents consisted of a clear serous portion above, and a mass of round cells below. The floor of the vesicle seemed to consist of the lower layers of the stratum cornuum below which the rete Malpighii appeared apparently unchanged. There was nothing of the usual multi-locular structure of the zoster vesicle. Further inspection revealed the origin of this peculiar vesicle. The essential histogenetic changes were found to lie further down in the hair follicle. The mass of round cells at the floor of the vesicle had the shape of an inverted cone, the apex of which lay just within the follicular orifice, and from this apex a line of round cells could be traced into the follicle alongside of the hair to a point about half way down the follicle, where they were greatly increased in number and where a circumscribed portion of the outer root sheath of the hair was seen to have undergone a degeneration analogous to that usually found in the Malpighian layer of the surface. In other words we have here a herpes zoster affecting the rete Malpighii of the hair follicle exclusively. The vesicles which were manifested clinically, though in size, grouping and distribution indistinguishable from the vesicles of zoster, in point of fact were not at all the zoster vesicles as we are acquainted with them. They were a secondary effect of the real zoster vesicle, which was located in the root sheath of the hair follicle, whence a sero-fibrinous exudation traveling up between the inner and the outer root-sheaths of the follicle raised up the horny layer at the follicular orifice, producing there the visible blister.

This form of zoster, which may be called zoster of the hair follicles, has not before been described, and for that reason I have thought it worth recording.

64 East 58th Street.

PLATE X.—To Illustrate Dr. S. Pollitzer's Article.



Fig. 1.

Vertical section of vesicle in herpes zoster.



Fig. 2.

Vertical section of hair follicle showing vesicle at the orifice of follicle formed by the ascending exudation from the zosterian degeneration in the wall of the outer hair sheath.

THE VALUE OF RADIOTHERAPY IN CUTANEOUS AND OTHER CANCERS.

By Charles Warrenne Allen, M.D.

Consulting Surgeon (Genito-Urinary Division) City Hospital, Consulting Surgeon (Dermatology) Randall's Island Hospital, Professor of Dermatology New York Post Graduate Medical School, etc., etc.

(Read Before Amer. Dermat. Assn., Boston, Sept., 1902.)

ONE of the most important and interesting questions today connected with the subject of cancer is, "What is the exact value of the new therapeutic measure so recently introduced, X radiation?" At this early date it is a most difficult question to answer.

Having had during the last year a somewhat varied experience with radiotherapy, an account of my efforts and results should be as interesting as any topic, which I might present for discussion. Although much mystery has seemed to enshroud the whole question of the nature of Roentgen's ray, how it is produced, what it is, and how it operates, the physical and mechanical features of the subject are, in point of fact, extremely simple. Hence the therapeutic use of the X-rays remains largely empirical and consequently not wholly satisfactory. Various theories have been advanced to account for the phenomena of the rays' production and their nature, as well as for the clinical effects which have until now been observed.

At the present day one theory may be as good as another to fit either proposition. It is known that when a vacuum tube is excited by a discharge of electricity, rays emanate from the kathode in straight lines. These kathode rays follow the general laws of reflection, so that if the kathode be made in the form of a concave mirror the point at which these rays will focus, can be accurately determined. If at this point an object be interposed the most brilliant fluorescence is produced and a new form of ray, differing entirely from the kathode ray, emanates in every direction. This is the ray discovered by Roentgen and now exciting so much medical interest, especially from its therapeutic side. The nature of the phenomenon depends upon the degree of attenuation of the medium within the tube, and the nature of this medium. Thus when a certain degree of vacuum is approached, the various preceding phenomena, discovered princi-

pally by Crookes and Geissler, are observed to give way to the phenomenon now universally known by the designation X. Because of its significance from the clinical side it is important to note that at the lowest degree of vacuum at which X-rays can be shown to exist, the penetrating quality of the rays is at its lowest. As the degree of the vacuum is raised the penetrating power or the strength of the rays is raised. The ideal procedure would be to produce a ray which would wholly penetrate the tissues to be operated upon—not stopping short on the one hand, not passing beyond on the other. Such, however, has never been, and in the nature of things, never will be accomplished. It can, however, be approximated.

As to the nature of the ray, the most plausible, or at any rate the least objectionable of the many theories advanced, is that molecules or *ions*, negatively charged, are projected through space in straight lines, and at an enormous velocity. These molecules penetrate the intermolecular spaces of the various substances, roughly speaking, in inverse proportion to the specific densities of the latter.

When the ray is applied to a pathologic process, it is a chemical change which takes place in the tissues, this is the only conclusion which can be drawn from the fact that in the laboratory chemical action has been demonstrated to be the only phenomenon produced by the rays, as instanced in the experiment of passing the rays through solutions of various salts, and producing disintegration.

When the rays are applied to the normal skin, no subjective or objective evidence of action occurs unless for reasons connected with the tube or with the individual in the nature of idiosyncrasy, conditions simulating those of a burn or tanning occur. When applied to morbid processes upon the surface, either no apparent action is noted, or we may get a charring of certain kinds of tissues, or a necrosis, or a gradual drying up, shrinking and slow disappearance of the disease which is replaced by healthy tissue. It has been demonstrated that with a low tube, the rays from which do not penetrate deeply, but are absorbed in the skin, the tendency to burn is greater, and in high tubes whose rays pass through the tissues and are less absorbed the tendency to burn is less. Just what occurs in tissues showing gross change, has not yet been fully investigated, but in the case of a maker of tubes, for a time under my care, in which there was severe dermatitis of the arm resulting in atrophic and cicatricial changes, contractions, deformity, and strange as it may seem, carcinomatous degeneration, necessitating high amputation and wide excision of lymph nodes, the histological pathology is now

being worked out in our New York Post Graduate Pathological Laboratory.

There would seem to be no question that, aside from the production of a burn-like dermatitis, the ray has a predilection for attacking tissues which are not highly vitalized,—embryonic, and also for highly differentiated but misplaced structures,—cell growths. Epithelial overgrowths can be seen to melt away at times without undergoing the usual necrotic or ulcerative changes, and in their place, healthy tissues are produced in such a manner as to lead to the belief that normal cell growth is stimulated. At times, indeed, the two processes can almost be observed to occur, *pari passu*, over limited areas.

If this new therapeutic measure consists in a bombardment of infinitesimal particles carried along ethereal waves traveling at an enormous velocity, we can almost imagine them attacking the infinitely minute particles of matter which go to make up the cell nuclei, the cells themselves and the microscopic organisms which may possibly lie back of the faulty direction which the cell growth has taken. The connective tissue cells would appear to be often unacted upon, and being left behind, form what has been designated as a mat or basis-structure, through and above which, the new growth, now no longer malignant, can take place.

Necrosis *en bloc*, seems, at times, to be imitated and the casting off process hastened, so that, with pronounced suppurative inflammation, rapid destruction takes place.

RECAPITULATION.

Of forty-seven cases of cancer which I have treated ten were breast cases; one rectal; one uterine; one involving the glands and tissues of the neck; three were sarcoma, and one supposed to be sarcoma. This leaves thirty, more or less, dermatological cancer cases. Of these, two involved the chin, being epithelioma, or cutaneous carcinoma; nine the nose or the nose and cheek; three were multiple (epitheliomatosis) one being in a subject of xeroderma pigmentosum whose eyes were likewise involved, one globe having been wholly destroyed necessitating surgical enucleation; five were upon the cheek and near the eye; four were of the lip, and two of the arm. The results in these cases are as follows:

Ending fatally	5
Discharged, cured	25
Ceased treatment, improved	3

Ceased treatment, unimproved..... 5
Improved and under treatment..... 9

CONCLUSIONS.

1. The X-ray possesses decided therapeutic power and may produce marked injurious effect.

2. From the study of the present series of cases, the writer is warranted in stating that the X-ray as a therapeutic measure is not a passing fad to be dropped after a brief existence.

3. The effect of the method is at times to produce severe symptoms, referable to the heart, lungs, and other internal organs, and systematic effects pointing to absorption of disintegration products thrown into the circulation more rapidly than they can be eliminated.

4. Metastases occur at times in grave forms of cancer more rapidly than we are accustomed to see in patients not so treated.

5. Cancer itself may be produced by the injurious effect of the ray in a person not known to be predisposed, as instanced in the case reported of the tube maker, whose arm had to be amputated for carcinoma developing in the X-ray cicatrix.

6. The X-ray dermatitis, and many of the good effects as well, depend upon the proximity of the tube, the degree of vacuum and the degree of heating of the anode.

7. Tubes may at times get into a "burning state." This condition of tube must at present be learned by experience and observation with the tube in question, as there is nothing to indicate just when this condition is present aside from the effects produced.

8. The method is not one to be solely relied upon in all cases of cancer.

9. In the nodular, wart-like and dry growths upon the skin, other means of removal, preferably by arsenical paste, should first be employed, and the rays may then be applied.

10. The indiscriminate application of the ray to all forms of disease as claimed to be practiced by advertising institutions and by charlatans, and the deceit practiced by calling other rays by this name, are apt to bring much unmerited reproach upon a method really useful, whose effect is at times almost magical but most often disappointing.

30 East Thirty-third Street.

SOCIETY TRANSACTIONS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Twenty-Sixth Annual Meeting, Held at the Hotel Bellevue, Boston, September 18, 19 and 20, 1902.

The President, GEORGE THOMAS JACKSON, M.D., of New York in the chair.

Second Day, Friday, September 19th.

(*Continued from page 47.*)

GENERAL DISCUSSION:

Acne Vulgaris, Etiology and Pathology. By Dr. T. C. Gilchrist, of Baltimore. (Will appear in March number.)

Acne Vulgaris, Symptoms and Treatment. By Dr. G. H. Fox, of New York. (Will appear in March number.)

Dr. JAMES S. HOWE, of Boston: I do not think I have anything to add to what Dr. Fox has said. I agree with him thoroughly. When I first began to practice dermatology, I thought that much benefit could be derived from the use of lotions in the various forms of acne, but as years have gone by I have come more and more to the conclusion that the surgical treatment of acne, as we might call it, is the treatment *par excellence.*

Dr. D. W. MONTGOMERY: I look upon acne as an expression of the *status seborrhœicus*—the expression of a constitutional disturbance. I think the ingestion of an undue quantity of fermentable food plays an important rôle in the etiology of the *status seborrhœicus.* I have habitually advised the dilution of the food in these cases, the diluent to be used being green vegetables, making a good deal of bulk with comparatively little nutrition. I think the dilution of the food by green vegetables is very necessary, especially with sedentary people, for the maintenance of the general health, and incidentally for the cure of the *status seborrhœicus.* The habitual use of bread-stuffs, meats, potatoes, and sugar, and these alone, with few green vegetables, is directly favorable to the development of the *status seborrhœicus.* I look upon the ingestion of olive oil as well as green vegetables as being of very great benefit in the correction of this form of mal-nutrition.

As far as local treatment is concerned, I do get benefit from topical remedies: I am sure they have a beneficial effect on acne lesions; the sulphur ointments and lotions at any rate are beneficial.

Dr. A. R. ROBINSON, of New York: I have not prepared a paper on this subject for general discussion, but my remarks will be brought to bear directly on the views advanced by Dr. Fox, with whom I disagree on several points.

I do not regard "acne vulgaris" as a constitutional disease, and the

lesions as merely a local manifestation of the general condition of the whole system; or as a necessary concomitant or consequence of a particular period in life associated with certain development processes, such as the period of puberty, or with abnormal physiological action during this period from abuse of certain organs, masturbation, for instance; or as an incurable affection until the period of puberty is passed; or as specially depending upon functional or structural diseases of certain organs, such as the uterus, stomach, liver, etc.; or the result of an attempt, on the part of the organism to remove supposed deleterious substances from the body through the agency of the sebaceous glands, and therefore a process not to be interfered with, but I hold it to be a purely local disease, depending upon local anatomical conditions for the predisposing causes, and depending upon a microbe to be found at the seat of the lesion for the direct exciting cause. That in the treatment, the local condition demands our principal attention. I also believe that, except in a limited number of cases, the condition of the body as a whole, or of some internal organ plays only a subsidiary or accessory part, and does not demand our first consideration.

I will limit the term *"acne vulgaris"* to the suppurative lesions of the sebaceous glands occurring upon the face and shoulders of *young* persons particularly, and associated with a parakeratosis of the regions affected, although I believe the lesions of *"acne iodata," bromata, acne piciata, etc.,* depend upon changes in the anatomy of the excretory duct area of the sebaceous glands for the predisposing factor, and upon the pus organism of "acne vulgaris" for the exciting factor.

In almost every case of "acne vulgaris" there is a local hyperkeratosis, an abnormal thickening of the corneous layer with a consequent partial plugging of the excretory duct orifice of the sebaceous gland. This keratosis extends also into the duct and can make the comedo plug, composed of epidermic cells and sebum, and often one or more lanugo hairs coiled up in the duct or within the follicular portion. This hyperkeratosis is the usual cause of the comedo, a very important condition in the majority of the cases of acne, as the retained sebum is the habitat of the microbes causing the inflammation.

I believe, in opposition to some writers, that there are other causes also, for this comedo formation; causes interfering with the normal propulsion of the sebaceous material to the free surface, such as atony of the follicle; a disordered function of the sebaceous glands, forming a sebum of greater consistency than normal; an incomplete fatty transformation of the epithelial cells of the glands; this, with loss of tonicity, causes plug formation. Retained and curled up lanugo hairs probably also interfere with the escape of the sebum; evaporation and absorption of the liquid elements causes hardening of the mass; the continuous formation of sebum causes dilatation of the follicle, and the comedo condition exists.

In my opinion, the inflammation is always caused by the staphylococcus pyogenes albus or aureus, especially the former. Other organisms have been described as the cause. Whatever rôle they may play in the causation of the keratosis, I do not know; but I believe that none other than the staphylococcus causes the suppurative process. Now the question arises, What other agents might cause folliculitis? Decomposing sebaceous matter? A chemical agent acting from without the body? Some virus or poison formed or taken within the body and eliminated by the sebaceous glands, and acting as an injuring agent? Perhaps some of these things may cause some of the nonsuppurative lesions present. This possibility cannot be denied until we know all about the causes of acne iodata, etc.

If the poison were generated in the system as, for instance, in the digestive tract, the disease would probably be more frequent in adult or late periods of life, which is not the case.

Admitting that "acne vulgaris" is an infectious disease; that the organisms causing the inflammation are widespread; that it occurs at a certain period of life; that all individuals attacked do not suffer in an equal degree, it follows that the predisposing factors are very important from a therapeutical standpoint.

I recognize the importance of the comedo plug as furnishing a habitat for the microbes. I think that this plug can also form without a hyperkeratosis; that an acne lesion can arise without a comedo condition; that a seborrhœa oleosa is frequently present making it easy for organisms to locate upon the skin, as, for instance, in a city atmosphere, a greasy skin is always a dirty skin.

Recognizing all this, our task is to consider the causes of the hyperkeratosis; of the seborrhœa oleosa; of the imperfect tonicity of the gland structure; of the abnormal physiological action of the glands, giving a changed sebaceous material, etc., if the patient is to be treated upon a broad, intelligent, and correct basis.

Time will not permit me to discuss this important part of our subject to any further extent, so I will pass on to the treatment of existing lesions. If comedones are in evidence, they should be removed by curettage if the papular form of acne is present and the follicular keratosis condition a marked feature.

If there is a more general hyperkeratosis I prefer soap and warm water; the strength of the soap depending upon the action required. I rarely use soft soap unless the seborrhœa oleosa condition is also marked, and still more rarely Hebra's Sprit. Saponis Kalinus. A glycerine soap should not be used, as glycerine has a tendency to decompose sebaceous matter into fatty acids and glycerine, and thus injure the tissues. If the sebaceous material is related to palmatine and stearine, cold water should not be used as it might harden the material within the follicles; interfere with its expulsion, and favor the invasion of microbes.

After washing, all the soap should be removed by water, as any free alkali remaining would favor separation of sebum into glycerine and fatty acids. The use of acetic acid with water or alcohol would suffice to neutralize any alkali remaining, and, at the same time, aid in the removal of "black heads," and in the general disinfection of the skin. I always advise the use of alcohol in a non-irritating form after washing the skin, for its antiparasitic and antiseptic effect.

Steaming the face is sometimes of decided benefit before using soap and hot water. Massage should follow the washing.

The above procedure (curetting, washing and massage) removes fat, empties the follicle orifices more or less, and lessens the keratosis. Some skins are injured by any soap stronger than castile or a superfatted soap. Reducing agents, such as resorcin, should be used if there is present a seborrhœa oleosa, or a marked hyperæmia, and salicylic acid for its keratolytic effect, if the keratosis is marked; the object being to prevent comedo formation and subsequent infection by pathogenic organisms.

When the lesions are markedly inflammatory in character, sulphur and beta-naphthol are indicated in addition, and the strength employed should depend upon the character of the lesions, and upon the vulnerability of the skin, the cutaneous tissues of some persons being injured much easier than those of others.

If the keratosis is marked a strong preparation of sulphur can be used for a few days, to cause hyperæmia and consequent increased disquamation of the cuticle; afterward a milder ointment may be used.

A clear idea of the object desired is necessary for the judicious use of the drug. With that knowledge, sulphur is undoubtedly our most valuable single agent in the treatment of most cases of acne. The following formulæ offer sufficient variation of combinations for individual cases:

(*a.*) Sulph. precip, 1½ dr.; Etheris, 6 dr.; Alcohol, 3½ oz.
(*b*) Potass. sulphuret, Zinci sulph. aa 1 dr.; Aqua rosæ, 4 oz.
(*c*) Sulph. precip., 1 to 2 scruples; Vaseline..... 1 oz.
(*d*) Sulph. precip., 2 scruples; Spir. camph., ½ dr.; Liq. calcis..... 4 oz.
(e) Sulph. precip., 2 dr.; Etheris, 3 dr.; Tinct. Camph, ½ oz.; Bay rum..... 3 oz.

The last preparation has given much satisfaction when the lesions were markedly papular and the inflammation mild.

By the above-named measures the keratosic condition is lessened and the comedo formation hindered. At the same time these agents are more or less anti-parasitic in their action.

If the acne depends more upon retained sebum and its invasion by microbes than upon a keratosis with comedo formation, a bi-chloride, or ammoniated chloride of mercury is probably better than sulphur and

can be used dissolved in alcohol, or alcohol and water, or mixed with vaseline. If hyperæmia is marked, an astringent, such as sulphate of zinc can be added to the bichloride.

If the keratosis depends upon any disturbance of the circulation in the part, in consequence of some internal disorder, or general condition, as chlorosis, etc., it must have appropriate treatment. If it depends upon a want of tonicity in the factors that aid in the normal removal of the sebaceous matter from the gland, local measures, such as massage, are necessary to tone up these factors and prevent accumulation of sebum. This local treatment is given in addition to appropriate general treatment for abnormal systemic conditions.

Although the life duration of a lesion is short it is necessary to treat the lesion in order to limit the inflammatory process, and prevent marked scarring; also to hinder infection of neighboring glands.

The treatment is the same as that given for any suppurative lesion, namely: drainage, and disinfection. When the microbes cause a marked suppurative perifolliculitis, the lesion being pea-sized or larger, and of long life duration and small abscess formation followed by marked scarring, tonics, especially codliver oil, and proper foods, etc., must be prescribed, in addition to the surgical measures.

The prophylactic treatment consists in attention to the general health, insuring good nutrition and normal gland function.

The local prophylactic treatment consists in attention to all the factors I have mentioned as predisposing; the use of a proper soap, massage, friction, disinfectants, etc.

Many ladies have the mistaken idea that soap injures the skin, and so, in not using it, have a thickened corneous layer and plugged sebaceous duct orifices. A good soap, used as I have suggested, is always advisable.

Were this paper not already too long I would dilate a little on the benefits of the X-rays in some cases; such, for instance, in which the keratosis condition is not a prominent feature.

Dr. Sherwell: I know Dr. Fox appreciates that I am interested, as we all are, in the treatment of acne vulgaris. Speaking from the standpoint of a clinician and empiric, and as one who has had considerable experience with this affection, I can say that I have been extremely fortunate in my results. The method of treatment I have usually employed has resulted in a fair amount of success, and my patients get well in a comparatively short time. Occurring, as acne does, particularly in the youth of both sexes, more especially the female, I have long been inclined to attribute it largely to troubles connected with the organs below the brim of the pelvis, such as congestive conditions of the uterus, bladder, rectum and urethra. As to the importance of the urethra in this connection, I have been misquoted, and I would limit it more especially to congestive conditions of the upper segment of the urethra.

I believe that these conditions give rise to a reflex irritation and hyperæmia, as I have explained in a paper read before the American Dermatological Association, 1884. When we meet with cases of *rosacea*, especially in women about the time of the climacteric, constitutional treatment directed to the pelvic organs is usually decidedly beneficial. In the treatment of acne, I resort to both constitutional and local measures, and whenever it is necessary I use the curette and massage. I believe that sulphur, in its various preparations, as Dr. Robinson said, has a pronounced curative effect, and is probably our best local remedy, although ichthyol, salicylic acid and resorcin may be of advantage in particular cases. Suppose a young girl from 17 to 20 comes to me with these acne efflorescences; my first care is to find out the condition of the lower bowel, whether she suffers at the time of menstruation, whether the periods are prolonged or shortened. In brief, I try to get the pelvic region in as normal a condition as possible. I use local measures on the lesions themselves, as most of us do. My favorite application is the following:

Sulphuret of potash	1 dram
Sulphate of zinc	1 dram
Alcohol and camphor water, each	1 ounce
Aqua rosæ	2 ounces

For internal use, I frequently prescribe the following on account of its beneficial effect on the pelvic viscera, and having good effect in lithæmic states generally; there is very frequently if not most commonly such a diathetic condition in the middle-aged female:

Sulphate of quinine	25 grains
Sulphate of magnesia	1 ounce
Dilute sulph. acid	2 drams
Tincture of nux vomica	1-2 dram
Wine of colchicum, Fld. Ext. of ergot	aa 3 to 5 drams
Glycerine, Aq. Dest	q. s. ad 4 ounces

Dessertspoonful in water mornings on rising; sometimes a dose or one-half dose at night.

Should be taken mildly diluted, then one-half tumbler of water in sips directly after.

Dr. C. W. Allen: I have not very much to say in connection with this subject. I believe more in the external treatment than in the internal, and I think acne, in that respect stands on a par with eczema of the infantile type. Most babies with eczema are fairly healthy and there are no indications for internal remedies. The same is usually true of acne. It is not uncommon for me to see a patient whose face is covered

with the papules of acne, but who gives no symptoms or indications of constipation or other internal derangement.

As regards the external treatment of these cases, I lay great stress upon the expression of each tiny comedo, some of them so small that they can only be seen with a magnifying glass. Many of these lesions must be searched for diligently, and when they are all removed the patient is practically well since new papules do not develop. If these lesions were of internal origin, one would expect a recurrence after a very short interval, whereas many patients will go on for the rest of their lives, or at least for many months without the necessity for further local treatment, and many of them will recover without any internal treatment whatever. I cannot reconcile that state of affairs with the theory that acne, in the majority of cases, is due to internal disorders. I recognize the fact that it is very difficult to cure those who have one of the so-called diatheses, and persons of certain texture of skin and peculiar conditions of tissue. I believe that deep-seated lesions are often due to something more than the local surface infection, but even in acne which might be called *abscedens*, where deep-seated pustular and boil-like lesions exist, and where there is apparently infection underneath the skin and through the tissues from within, I believe the eruption is due primarily to an infection which extends from one follicle to another, through tissues of least resistance.

I did not think of discussing this question, but it is a very interesting topic, and I will only advance these few personal views, which differ somewhat, I believe, from those usually held.

Dr. Fordyce: I agree in the main with the views expressed by the reader of the paper and Dr. Robinson that local conditions have more to do with acne than general conditions. At the age of puberty, when the horny layer of the skin is active, we have a hyperkeratosis. The comedo formation is due to hyperkeratosis of the follicular orifice, and for that reason I believe that the use of local remedies to produce scaling of the skin is indicated. For this purpose I prefer sulphur, beta naphthol and green soap; the latter particularly, I consider one of the best applications we have. I have not seen these patients much benefited by the treatment of general conditions, such as anæmia or digestive disorders.

I have seen massage, as done by non-professional persons, give rise to the infection of other follicles and make the case very much worse than before. I have seen the disease spread to the neck and upper part of the chest as the result of massage. This would indicate that an organism was the cause of the trouble, and that infectious matter may be conveyed from one follicle to another by massage. I believe in the curette in certain cases, and regard soap and sulphur the best preparations we have in the treatment of this affection.

Dr. William T. Corlett: I did not hear the first part of this paper, but agree in the main with Dr. Fox, that local applications are of

more importance than constitutional measures in the treatment of acne vulgaris. I have not been able to associate acne with any deranged condition of the general system. I have never been able to benefit these patients by internal medication or bathing, nor have I observed any good effects from the enforcement of a special diet. In my experience, constipation is fairly uncommon in people with acne. These patients are usually young and robust, taking plenty of exercise and bathing frequently.

As far as local applications are concerned, I believe that sulphur and boric acid and alcohol are very valuable remedies in the treatment of the affection. I have used the curette, as advised by Dr. Fox, but not with his success. I prefer to the curette an ordinary bistoury; it takes longer to do the work, but I think the results are better. Recently, I have used the X ray in the treatment of acne, and while the results obtained in certain cases have been very striking, I am not yet prepared to speak of the final outcome of this new method in this connection.

Dr. Dyer: I must live in a community in which acne is a little bit more common and constipation more usual than in the localities where those who have previously spoken on this subject reside. For me, it is exceedingly unusual to find a case of acne in which constipation does not exist, and I am satisfied in my own mind that acne, as it occurs in my practice, is generally associated with constipation. After the constipation has been corrected, and the eruption on the face improved or cured, I have frequently seen a relapse of the latter with a recurrence of the constipation. As a matter of fact, at least eight out of ten of my acne patients suffer from constipation, although sometimes it is difficult to get such a history. It often requires close questioning to get at the facts.

So far as the local treatment of acne is concerned, I have followed the various methods suggested, and I have found that in order to benefit these patients we cannot follow any general rule, but must individualize. I do not think that a wholesale curettement is justifiable in every case. I believe that when the lesions are hard and deep-seated, the curette or lance is necessary, but I disagree with Dr. Fox in his sweeping condemnation of lotions and salves.

Dr. C. J. White: I have had no experience with the operative treatment of acne. Here in Boston we have success, in the majority of cases, by the use of soaps and washes, excepting in a certain minority of instances, where no form of treatment seems beneficial. These cases are represented by the small types of acne, where the lesions disappear only to recur in the course of a few months.

Dr. G. F. Harding: I think the individual must be considered in all cases of acne. There are many cases where the mechanical treatment is of advantage, and others where local applications are preferable. In the class of cases referred to by Dr. White—the small, recurrent type of

the disease—I have found that internal treatment, particularly the internal administration of ichthyol or ergot, is often beneficial, even without any external application. I believe that in this class of cases the eruption is dependent upon a congestive condition of some of the internal organs, which must be relieved. In some cases, an examination of the gastric contents has revealed a lack of hydrochloric acid, and here the question arises whether fermentation was not the cause of the trouble.

Dr. E. B. Bronson: At the last meeting of the Association I expressed my views with considerable fullness in regard to particular features of acne, and the opinions expressed then I still entertain. I am perfectly convinced in my own mind that the fundamental, the essential factor of acne is a structural trouble incident to the adolescent, development period: that this is the *sine qua non* of the disease. Therefore, in our treatment, if we would be successful, we must address ourselves primarily to this structural trouble. This does not imply that there are no accessory factors which have an important bearing on the disease. They are exciting causes, frequently, but they are not the primary factors. All the systematic, constitutional troubles that have been referred to as having to do with the occurrence of acne constantly occur without producing acne. We may have all of these in their most aggravated form without acne, and I am convinced that in order to have acne you must have this primary structural defect. It is all very well to try and ferret out the various disorders which may exist, the gastric or intestinal disturbance, the pelvic congestion, etc.; they should receive our attention, but I am not willing to relegate to the general practitioner the treatment of acne. I believe we know better what is the condition of the skin in these cases, and that our methods of treatment are better.

As to the anatomical changes in these cases, Unna and others have demonstrated this hyperkeratosis of the skin, with alterations in the interior of the follicle. The secretion, instead of being purely oily, is a mixture of oily with corneous matter, resulting in an inspissation of the contents, and a comedo is formed. Furthermore, there are germs which have the potency to do great injury to the skin; these may remain dormant until there comes a wave of irritation from some other part of the body, which acts as an accessory factor. The comedo and its contents acts as a foreign body, and inflammation is the result. In a given case it may be difficult to decide to which of these factors we should attach the greatest importance. In my opinion, if we address ourselves to the primary trouble, we will succeed in the large majority of cases. By emptying the follicles, removing the hyperkeratosis of the skin and by thorough local disinfection we can usually produce a steady improvement, very nearly what you would expect in a true parasitic disease. In many cases of acne there is an outbreak like that of rosacea; the lesions will appear with considerable suddenness, but always in an area of dis-

eased follicles. When the disease begins to crop out again after a thorough disinfection, it does not, as a rule, occur as in rosacea or dermatitis herpetiformis, but you will see here and there an isolated follicle that has not been thoroughly disinfected in the area where it occurred before. The disease affects by predilection certain areas, such as on the forehead, in front of the ears, or nearer the nose. When a recurrence takes place in such areas it does not occur in the manner of true reflex diseases of the skin, but shows where the previous local treatment was imperfect.

Dr. H. W. Stelwagon: While I agree in some respects with Dr. Fox, I am inclined to take the view of the French writers who believe that when you say acne, you say stomach or indigestion, and, therefore, that in many of these digestives, intestinal antiseptics and laxatives are indicated. The remedy which has served me very well in the treatment of the indurated type of acne, a type not uncommon in the strumous, is cod liver oil. I have seen over and over again cases which were long and unsuccessfully treated with lotions, etc., get well under small doses of cod liver oil. I have never seen any beneficial results follow the use of ergot or ichthyol.

As regards the external method of treating acne, I am diametrically opposed to what Dr. Fox said. I think I can get better results from lotions than from the curette. Dr. Fox, in his paper, was not altogether consistent, as in the latter part of his paper he lauds resorcin ointment and soap and other external medicinal agents. In superficial acne I can get better, quicker and more lasting results by the use of lotions than by the use of the curette. Of course, by using the curette the pustules are evacuated immediately, but the disfigurement is temporarily increased and takes time to disappear. With lotions, the lesions disappear gradually without increasing the disfigurement. I do not decry the curette; on the contrary, I resort to it occasionally, but patients will not submit to the treatment as willingly as they will to non-operative measures. Sulphur is probably the specific local application, if there is such. I employ most frequently a lotion of sulphate of zinc and potash, a half to four drams of each to four ounces of water, usually with the addition of a few minims of glycerine; in the reaction which takes place in the compounding of this prescription, free sulphur is precipitated. I use this solution strong enough to get an exfoliation of the skin. It also exerts an astringent action.

Dr. H. G. Klotz: My views regarding acne correspond so closely with those expressed by Dr. Robinson, that I will confine myself to a very few words. I regard acne as the result of secondary infection with a pyogenic micro-organism of a seborrhœic condition of the skin, but I treat the secondary process first. As far as necessary I treat surgically by lancing, curetting and antiseptically, with moist applications, usually of bichloride of mercury, in the strength of from 1-3,000 to 1-1,000 combined with an ointment of white precipitate of mercury, etc. After the

antiseptic treatment has been carried out, I find that sulphur and similar drugs, in combination with salicylic acid, gives the best results in treatment of the seborrhœa. I pay due attention to the general health of the patient, the condition of his digestion, bowels, etc., but I must say that I usually find very slight indications for internal medication. The effect upon certain persons of particular articles of diet, for instance, cheese, I look upon as an idiosyncrasy. Because cheese or some other particular food or drink causes an eruption of acne in a certain person, I do not think we should forbid it in all cases. Instead of this, we should try to learn the source of the pyogenic infection, which can often be done, and thus recurrences can be prevented. Having lately been paying more attention to this point, I briefly mention a few cases to illustrate this fact:

One patient was a woman who had suffered from acne for three or four years. After several months of treatment she was entirely relieved, but six months later she returned with a slight recurrence. Upon investigation I learned that during the interim her children had suffered from scarlet fever and she had been obliged to nurse them and neglect herself.

Another patient was a teacher in one of the public schools. She had suffered from acne for a long time, of which she was entirely cured after a course of treatment. Subsequently, she was transferred to a school on the lower East side, and within a few weeks her acne recurred. As usual a large percentage of the pupils in the school to which she had been transferred suffered from pediculosis capitis, which I have found is very frequently the source of pyogenic infection. I told her to be very careful not to touch her face with her fingers and to pay particular attention to her finger-nails. She complied with these instructions, and in a short time the acne again disappeared.

In an elderly woman acne of several years standing could be traced back to a purulent otitis. In another case I was able to trace the infection to a boil, and I believe that in many similar instances we could find the direct cause of the infection if we would take the trouble to ferret it out.

Dr. Joseph Zeisler: If this discussion had taken place a year or two ago, I would have added my testimony to what has been said regarding the use of the curette, salves, lotions and so on in the treatment of acne, and I believe I have used them all. I have benefited many by these means; I have seen relapses occur after all these methods. To-day I will be very brief indeed in whatever I have to say on this subject, because I have discarded entirely and I hope forever the curette and the lancet in these cases, use only indifferent applications on the skin, and pay less attention to the digestion and intestinal tract, and simply rely upon the most marvelous of all curative agents in the treatment of this affection, namely, the Roentgen rays. I have a record of 34 such cases which I have carefully observed during the past six months, and the results are

so far superior to anything I have ever seen, that I regret the hours of hard labor I formerly spent in the local treatment of acne. I simply want to express my conviction that before a very few years have passed by, every one of you will be very happy indeed to rely chiefly on the use of the Roentgen rays in the treatment of these cases, until we find something better.

Dr. James C. White: I have only a few words to add to this discussion. I agree with what has been said regarding the value of internal remedies in certain cases. I think that in acne, as in other skin affections, we should make inquiries regarding functional or organic disturbances and rectify them to the best of our ability.

With regard to external remedies, while there are certain ones upon which we generally rely, I think it has been shown that acne may be treated in different ways with about the same degree of success. We must all confess that we occasionally fail to cure these patients, although we may resort to one or all the well-known remedies. Certain types of the affection I can almost promise to cure in a comparatively short time: they are the cases of rosaceous acne in middle life, which we can control by the remedies which often fail in the juvenile cases. I believe that anybody who limits himself to the mechanical method of treating acne, to the exclusion of other methods, greatly restricts his powers of usefulness. Personally, I rarely resort to mechanical methods, as I get sufficiently satisfactory results from the action of such remedies as sulphur, corrosive sublimate and resorcin. I regard these as the sheet-anchors in the local treatment of this disease. In acne of the irritable type, much relief is afforded by soothing applications.

With regard to the treatment of this disease by the Roentgen rays, we have seen marvelous results from it in one type of the affection, namely, in local, long-continued, deep-seated acneiform inflammation of the bearded face. It cures quickly cases which have resisted months or years of treatment with other remedies, and I hope that Dr. Ziesler will give us more information on this point.

Dr. Hyde: I am sure that I need not remind the gentlemen who are present that this is one of the largest subjects that we can discuss in dermatology, and he indeed must be fatuous who would undertake to outline the treatment of acne in five minutes. Certainly, it is in preponderance among all our cutaneous diseases. It is difficult to take a general view of so large a subject. One of the gentlemen has described about 34 cases treated by the X-ray. I also have done my share of this method of treatment. Dr. Bronson emphasized the structural changes in acne; Dr. Robinson, to whom I owe so much in many ways, lays stress upon the germ which settles in the hyperkeratosic skin, and when he described the atony of the unstripped muscular fibers in these cases, I thought of two young six-footers I saw this morning on the street, brawny and athletic, with acne lesions covering the surface of the jaws.

One would hardly expect to find atony of the unstripped muscular fibers in this class of patients.

To come back to this discussion, I want to say that Dr. Fox reminds me of the description which the poet gives us of the reformer. He stands before a fortified city and simply shakes his fist: after a time down come the ruins, and then he stands there alone. I have followed his work for the best part of the last quarter century, have talked and corresponded with him about it, and I still believe—although I cannot go quite so far as he—that his methods are the best in a large number of cases, but not in all. I have used the curette regularly and systematically for years. It is not with me, as with Dr. Fox, the sole method, but I firmly believe it is one of the best methods of treating acne, and I certainly am sure it is my last resort. I am equally positive that Dr. Fox and I could bring a procession of patients into this room who have been cured by this method, and the sight of whom would prove exceedingly valuable and convincing.

I have enjoyed thoroughly Dr. Fox's presentation of this subject. I regard him as a reformer, and I believe that many of us will some day recognize the value of the position he has taken, although at the same time I wish to indorse the value of certain local applications, such as sulphur.

Dr. Duhring: I do not care to enter upon this subject to a large extent, and will confine my remarks to some of the statements made by Dr. Fox. From the paper we are led to infer that the internal economy, viewed as a whole, plays an unimportant part in the etiology of this disease. In order to discuss the treatment of this disease intelligently, the term should be defined in a measure. I would like to consider a certain type of acne vulgaris occurring in an adult, say a person of twenty, man or woman, in what is called average health. The disease has existed, let us suppose, two years, and is of a relapsing character, as acne is apt to be. My success in curing (not relieving) cases of that kind has not been very great with strictly local treatment, although I realize that local treatment is of distinct benefit in most cases, but the difficulty that I have encountered has been that relapses occur from time to time. Patients who have been subject to acne for a number of years recognize this recurrent character of the disease, and it is for that purpose that they often seek advice. The subject of recurrent acne has always impressed me very seriously in connection with the treatment of the disease, and I have always had in mind the possible prevention of such recurrences. I think that every case of acne of the type I am speaking of, in a young adult, between the ages of 18 and 30, should be viewed as an individual case; the treatment of no two such cases can be precisely alike. When I speak of the treatment, I mean particularly the internal treatment, and one having in mind a permanent cure. I have learned from experience that the internal economy is the seat and cause of most cases of acne.

If you ask me where the internal disease or disorder is seated I cannot answer at once, because each case presents its own symptoms and form of disease. Not all persons are by nature subject to acne in the same degree, but there are certain internal conditions which predispose to acne in many individuals, and often cause it. One of the most common causes is alimentary canal derangement, particularly having its seat in the colon, and when this is sooner or later remedied, the acne often disappears without any local treatment. The lesions or disorder which exist in the colon may be so insidious that the patient himself is entirely unaware of their existence, the discovery only being made after careful and thorough investigation. The mucous membrane of the colon becomes more or less chronically affected, mucus collects on the internal surface, functional activity being interfered with prevents the proper assimilation of food and serves as a source of irritation. This has been demonstrated time and time again by the success I have had in some cases which had previously resisted other methods of treatment. I refer to this with the view of calling the attention of the members to it; this condition is a possible cause in some cases of rebellious acne that may come under their care. If these patients are relieved of this chronic catarrhal condition of the colon, they are not only often relieved of the acne, but are at the same time bettered in general health.

Dr. F. H. Montgomery: I shall limit my remarks to one phase only of this large and interesting subject; that is, the treatment of acne by the Roentgen rays. Dr. Hyde and I can endorse heartily what Dr. White said with reference to the use of the rays in this affection. There is no doubt that the results are brilliant in some cases of deep-seated acne, in which the follicles are being rapidly destroyed, and the usual methods of treatment have been unavailing.

In the more diffuse forms of acne the treatment has given at least temporary benefit: as to the permanency of the cure, we are not in a position to speak, for the reason that we have used radio-therapy in such cases only as an adjunct to other treatment. Radio-therapy cannot be expected to replace treatment of the systemic conditions on which many cases of acne depend. Nor is it quite clear to us how the treatment will prevent recurrence of the disease in the same or new follicles, unless the action of the rays be carried to the point of causing atrophy of a large number—if not all—of the glands and follicles of the affected part of the face. The question then arises as to what effect such atrophy of the glands and follicles would have on the skin five, ten, twenty, or more years later. There is no doubt that radio-therapy is a valuable addition to our present methods in the local treatment of acne, but we do not believe that it is a wise or safe routine treatment for this disease.

Dr. Ravogli: In 1893 I said that eczema was nothing else than a culture of staphylococci in the skin. I had made some experiments, the

results of which were published in that year in the New York *Medical News,* and subsequently re-printed by the *Practitioner.*

To-day I say that acne, folliculitis and eczema are from the same cause. So long as the micro-organism is absent, we have only a case of seborrhœa, and we do not have pustules produced until the advent of the staphylococcus, which sets up the inflammatory process.

We see two varieties of acne vulgaris, one very common, which is due to an affection of the duct of the sebaceous gland, and then we have the deep-seated form, which we get in acne indurata. I believe that the condition of the intestinal tract has much to do with the production of acne, and for this I have the following explanation to offer. With constipation, considerable quantities of sulphuretted hydrogen remain in the intestinal tract; this is carried into the circulation and absorbed, and influences the oxygenation of the blood corpuscles. When this persists for any length of time, anæmia results, and the secretion of the sebaceous glands, which is furnished by the blood, becomes altered in character and consistency. The relation between the fatty acids which make up the normal secretion are displaced, and when the stearic acid predominates over the oleic, an irritation is produced, with shedding of the epidermis and the formation of comedo. Then comes the micro-organism in the shape of the staphylococcus, which produces an inflammatory process and thus we have the development of acne.

The treatment of acne, of course, is the curette, and I still use an old instrument, which was given to me many years ago by my revered teacher, Prof. H. Auspitz. The X-rays, however, I believe, will be one of the most effective methods of treatment in the future. In the limited experience I have had with this method, the results were excellent. In addition to it, we can use lotions, and open the abscesses and relieve the obstruction of the ducts.

Dr. Fox: (Closing the discussion.) I have been amused and somewhat grieved to find among a body of men of such vast experience such manifestly wide differences of opinion in regard to the treatment of a common disease, but I can easily explain this. It is due to various causes, and to the reverence which we have for the old masters in dermatology, to the habit which custom breeds in a man after years of practice and to the hesitancy or inability which most of us have for giving some other plan of treatment a fair trial. I think we are all right in whatever view we take, but we look at a subject too often from simply one point of view. In recommending very strongly the mechanical method of treating acne, I have not said that sulphur ointment had no value. All of these soothing and slightly stimulating applications are more or less beneficial, but what I claim is that they are of little use and usually unnecessary. While a camel's hair brush might be of some use in sweeping the carpet in this room, a good, stout broom would be preferable. So a good, stout curette

vigorously used is better in acne than the various lotions and ointments and time-wasting applications to individual follicles.

In regard to the general treatment of the disease, every one knows the change that takes place in an athlete who goes into training; the eye gets brighter, the skin clearer, and if he has any structural disease, a little acne, or even psoriasis, it will disappear. If I had no other treatment than the tactics of the trainer, I could speedily cure most cases of acne and cure them permanently.

As to the sulphur ointments, I have used them in acne and obtained good results from them, but I now have a better method. While reviewing articles on dermatology for a medical journal years ago I found that a German writer strongly advocated the use of the curette in acne sycosis. In criticising the article I said that while this method of treatment might do very well for German skins, it would not do for American skins. A year or so later I happened to try the curette; was surprised at the results of its use and gradually worked into the habit of using it almost exclusively. If you want to honestly test the value of any certain method of treatment, use it to the exclusion of all other methods. If you want to find out how much can be accomplished by mechanical means, get a ring curette or a Volekmann spoon, and use it exclusively for a month or more and note the result.

One word in regard to the X-ray treatment. I am waiting patiently for the time to come when acne will be no more as the result of X-ray treatment. I doubt if it will ever come. To those who are using this method of treatment I would say, do not report cases that you expect to cure. When you have accomplished some definite results, demonstrate them. Call in some of your dermatological friends who are not so enthusiastic and let them examine the cases from time to time, and give their report as to the results obtained.

Another Instance of a Disease Caused by a Fungus. By Drs. D. W. Montgomery, Howard Morrow, and H. A. L. Ryfkogel. (Read by Dr. Montgomery.) (See page 5, Vol. XXI.)

A Case of Cutaneous Blastomycosis Followed by Laryngeal and Systemic Tuberculosis. By Dr. F. H. Montgomery. (See page 19, Vol. XXI.)

Dr. Hyde: I have listened to the papers upon blastomycosis with much interest. Some of the pictures which Dr. Dyer exhibited in connection with his paper suggest to my eye the clinical picture of blastomycosis, but not more so than some pictures which Dr. Robinson showed me this morning, which we know had no relation to the disease under discussion.

With reference to Dr. D. W. Montgomery's interesting report, I wish

to say that through the courtesy of him and his colleagues I had the opportunity of examining sections of tissue from their cases while I was in California last winter, and in them I could not detect a single budding form. The organism, surrounded by its concentric contours, was present in all cases, but in the matter of budding forms it bore no resemblance to what we see in blastomycosis. The relative rarity of small abscesses in the cases reported from the Pacific Coast, the invariably fatal result, and their refusal to improve under treatment such as we found successful in Chicago would seem to point to some different disorder. At the same time, I cannot speak positively on this point. In California the flora in general differ greatly from that which we see in and about Chicago; the trees and the vegetation are so different that it is quite possible even that fungi share in this diversity. It might be that an infection of the human body in that country with an organism not essentially different from that which we have been cultivating in Chicago might behave differently in that soil and environment and in the East of our country.

I want to corroborate what Dr. F. H. Montgomery said in regard to his case, which was a very interesting one. I am fully in accord with his statement that a certain proportion of patients affected with chronic disorders of the integument exhibit lesions which furnish an open trap for the entrance of micro-organisms. That some of these patients should develop tuberculosis would seem exceedingly probable, and instead of this being the unexpected, I should look upon it as to be expected and as throwing no shadow of doubt on the etiological factor in the majority of cases of blastomycosis cutis.

Dr. C. J. White: I would like to ask Dr. D. W. Montgomery whether any investigations have been made in order to demonstrate the presence of these organisms in the valleys of California? I would also ask Dr. F. H. Montgomery if he has ever cultivated these blastomycetic organisms on a large surface, as has been done with those of ringworm, which assume different forms if they are given space enough to grow upon?

Dr. Bowen: It is a curious fact that these diseases seem to be restricted to certain localities. We have been on the lookout for them in Boston for the past four or five years, and have particularly searched for evidences of this blastomycotic infection in cases of verrucous tuberculosis, but always with negative results, with one exception, and in that instance we found peculiar bodies enclosed in giant cells, which will be shown at the session this afternoon. No cultures were obtained from it, and I do not believe it was a case of blastomycosis.

I would like to ask Dr. Montgomery about the clinical appearances in his case; whether they corresponded with those in the preceding series of cases?

Dr. D. W. Montgomery: We have not been able to find this fungus in nature, and I do not know exactly how to go about finding it. In

appearance, it resembles a great many other fungi. It must be widely distributed, as it grows so readily on such a variety of culture media.

From a biological standpoint, too much stress cannot be laid upon the fact that there is an absence of budding. This is a real point of difference upon which the biologist would lay stress in classifying the fungus. I have no doubt that this point separates it from the blastomycotic infective agent which, as I understand it, is a budding fungus. This fungus of dermatitis coccidioides never does bud; we can say that positively.

All the cases of dermatitis coccidioides observed have been in males, and all have proved fatal.

In the present case I first saw the patient a year before the diagnosis was made. I could never have made the diagnosis from the clinical standpoint, although I had seen all the previous cases. This serves to indicate how widely it differed clinically from the other cases. There were large tubers on the skin in the other cases, resembling those of mycosis fungoides and of iodide poisoning. In the case in hand, the infiltration was very pronounced, particularly in the region of the arm; after this region had been exposed for some time to the X-ray, and the pyogenic bacteria were killed, the infiltration subsided, and button-shaped tubercles came to light. These button-shaped tubercules were equivalent to the tomato-like masses observed in the previously reported cases.

Dr. F. H. Montgomery: Regarding the matter of clinical diagnosis, Dr. Hyde agrees with me that it is not possible to make a clinical diagnosis of cutaneous blastomycosis from photographs, or even from an examination of the patient, in every instance. We have, however, found certain characteristic symptoms. In every case there has been seen in some part that peculiar, smooth, sloping, violaceous border, and in that border a number of deep-seated, very minute pustules or abscesses, the smallest of which require for their recognition a magnification of several diameters. On puncture, these minute abscesses give vent to a small quantity of sticky serum or sero-pus, which contains the characteristic micro-organisms.

In reply to Dr. White, I would say that we have made plate cultures repeatedly; and by using different media and subjecting growth to different conditions, we can produce a large variety of forms from a given organism.

In comparing cultures kindly sent us by Dr. D. W. Montgomery from one of his cases of protozoan disease with cultures from some of our cases of blastomycosis, we find the gross appearances and some of the microscopical forms strikingly similar. As Dr. Montgomery has stated, the most important distinction between blastomycetes and the protozoan bodies is the failure to find budding forms in the latter. Endogenous spore formation does not rule out the blastomyces, as it has been shown that the latter may multiply by this method. As to the size of the organisms, that varies considerably, and is not important.

In the fatal case I reported the organisms were large, almost as large as those in the cases of protozoan disease.

With reference to treatment, most of these cases improve under potassium iodide to a certain point, after which little or no progress is made, even though the drug be continued for months. A few cases have completely recovered under this treatment alone. In two cases, the final lesions, which refused to disappear entirely under the influence of potassium iodide, were removed with a few exposures to the X-rays.

(To be concluded.)

NEW YORK DERMATOLOGICAL SOCIETY.

307th Regular Meeting, October 28, 1902.

Oscar H. Holder, M.D., President.

(Continued from page 50.)

A Case for Diagnosis. Presented by Dr. J. A. Fordyce.

The patient was woman of nineteen who, for the past seven years, had had an eruption on the legs, arms and face. It was said to have begun as blisters, but from the appearance it was more probable that it began as a brownish-red infiltration. There was some itching connected with it. She now has scars and pigmentations, as well as more recent brownish-red infiltrations.

Dr. Lustgarten thought the case was one of folliclis, and not identical with Dr. Fox's case of acne varioliformis.

Dr. Allen said he had presented this girl to the Society a number of years ago with a diagnosis of acneitis. At that time there were certain lesions which were very suggestive of the necrotic chilblain affection. He had asked Dr. Johnston to excise a portion of the skin for microscopical examination. The lesions, which were interesting at that time, were now absent, but the time referred to was in winter, the season at which such lesions became inflamed and presented a necrotic center. He still regarded the case as closely akin to acne varioliformis, though producing at times lesions never seen in that disease. The records showed that Dr. Allen had presented the case as one of hydradenitis, in September, 1899.

Dr. Fox said that the present eruption was certainly not acne varioliformis. The numerous round cicatrices upon the arms, he was sure, were the results of the lesions, and not the result of the smallpox eruption, which showed on the face in the form of pitting.

Dr. A. R. Robinson thought the case was one of hydradenitis.

Dr. J. C. Johnston said it was curious how these cases varied

clinically, yet how absolutely alike they were pathologically. He would regard the case under discussion as typical of the disease. The distribution along the extensor surfaces on the arms and on the legs down to the top of the foot, and the history of getting worse in winter, led him to regard this as a typical eruption. At times, the lesions would be localized upon the fingers alone, and this he would agree with Dr. Allen in calling necrotizing chilblain. The hard papule with the necrotic center was very characteristic. In two cases he found the picture shown to-day, and in three out of the six cases the inflammation was not localized around any of the skin appendages. Dr. Allen's case was called hydradenitis suppurativa. From the pathological characters he had been led to call all these cases granuloma. In about 56 per cent. of the cases there was a history of tuberculosis.

Dr. Robinson said that different names were certainly required for cases which were so different clinically. For instance, it would not do to call all skin diseases due to the staphylococcus by one name. Such terms, as acne, furunculosis, impetigo, sycosis cannot be dispensed with.

Dr. Fordyce said that the case had many clinical features in common with the case originally described by Dr. Bronson. In that case the lesion affected the sweat-glands.

Dr. Lustgarten said that of 500 post-mortem examinations published in Virchow's Archives, and made on cases not supposed to be tuberculous, in 98 per cent. tuberculous lesions were found.

A Case of Erythema Simplex. Presented by Dr. H. G. Klotz.

Dr. Klotz presented a case of erythema simplex or hyperæmicum, as named by Elliot, in Morrow's System. The patient, Mrs. P. T., forty-four years of age, is generally in good health, free from irregularities of the heart or the sexual organs. She states that about two or three years ago she brought on a very profuse perspiration for the relief of an exposure to cold, which was followed by an intense redness of the face, and an eruption of pimples. This disappeared, but since then the present condition has gradually developed; *i. e.*, the appearance of an intense redness of the face, restricted to the nose, cheeks, forehead, chin and neck, leaving the eyes surrounded by an almost white zone, which presents a very peculiar picture. On close inspection, numerous dilated capillaries are noted. The hyperæmia, which appears in consequence of mental irritation or of some muscular exertion such as bending down, is accompanied by a sensation of heat. This lasts only a few moments, giving way to a moderate redness with a few dilated blood vessels. At times eruptions of small vesicles and papules have appeared on the affected portions of the face, which generally disappear under the use of some mild ointment, but there is no permanent intumescence or infiltration as in rosacea. Different remedies, such as ergot,

ichthyol, etc., have been tried without benefit. In the spring of 1901 the patient suffered for several weeks from purpura of the legs, with superficial ulcerations, which have healed without leaving any changes.

Dr. Lustgarten said that the woman showed an exaggeration of a condition which was not very rare. She was at the climacteric, and various neurotic conditions were present. She had a rosacea such as was often observed at that period of life. He would suggest the use of ovarine in doses of two to five grains, three times a day.

Dr. Allen agreed with the view expressed by the last speaker, but besides giving ovarine he would exclude tea, beer, hot soups, and other things which would increase the blood supply to the face.

Dr. Robinson said that it was probably due to a reflex from the stomach and not from the uterus. The reflex lesions from the uterus almost always showed on the lower half of the face, and when the lesion covered the upper part of the face or covered the whole face the reflex disturbance was apt to be from the stomach.

Dr. Fox said his diagnosis was rosacea erythematosa.

Dr. Piffard thought it was a case of erythema simplex complicated with rosacea and acne. He would apply iodine vasogen, which would control such vasomotor phenomena very well.

Dr. Sherwell said he would call the case reflex erythema. Reflexes from the pelvic region would produce such disturbances on the face far more frequently than a reflex from the stomach. An important part of the treatment was evacuation of the bowel, and attention to the pelvic viscera generally.

Dr. Klotz said that the disease had been in existence for three years, still the woman had always been menstruating regularly; there was no irregularity to be found in the heart; her digestion was certainly as good as the average, and as far as he knew she did not indulge freely in beer, but had abstained from it on account of her trouble. There was absolutely no reason for calling this condition rosacea, as there was no permanent dilatation of blood-vessels nor tissue infiltration or hypertrophy of any kind. The skin was very irritable, and although superficial vessels and papules would develop at times, there had never been present any real symptoms of acne. He had tried a great many local applications, besides internal remedies, but they had mostly seemed to aggravate rather than benefit the condition.

Finsen Light Treatment; X-Ray Treatment, and the Use of Carbolic Acid and the Burr Compared A Case Presented by Dr. G. H. Fox.

This was the patient with lupus of the nose, who had been presented at the last meeting. Upon the left or worse side carbolic acid had been used along with the burr, and on the right side the Finsen light treatment

had been tried for twenty sittings. Since this first presentation of the patient she had received eleven X-ray treatments on the right side.

Dr. Allen said it was impossible to apply the X-ray so as to entirely avoid its beneficial influence on the opposite side of the nose. There was a decided improvement on the side that Dr. Fox had been treating with the burr, and it looked better than the side on which the X-ray had been used; but when the latter treatment was begun there was a large ulcer on the ray side, whereas the other side was much more nearly cured.

Dr. Piffard said that he had heard some very remarkable and unjustifiable statements regarding the new light treatment. He thought the case was much more likely to be benefited by the X-ray than by the Finsen light. Finsen started by treating a large variety of cases by the solar rays concentrated by lenses. His success was only moderate. He thought at the time that the benefits at first were due to the solar rays, but the treatments had to be given for an hour or more daily for long periods. The heat rays were at first cut off by a water jacket; then he used a blue cell containing the ammonio-sulphate of copper. After a time he began to think that the solar rays were not of much importance, but that the benefit arose from the invisible rays, the ultra-violet rays. He then made use of the electric light, not solely as a matter of convenience, but because it was known that this light was vastly richer in the ultra-violet rays than was sunlight. Ultra-violet rays were supposed to exist in sunlight, but they do not reach the earth because they cannot pass through the atmosphere. Even with the electric light the therapeutic progress was very slow, and then it occurred to him that these ultra-violet rays would not pass through glass. Quartz was substituted for glass in the lenses and other vessels used. He employed the low-tension arc. About eighteen months ago another investigator, Dr. Görl, of Erlangen, published a paper in which he showed that the high-tension arc was vastly richer in ultra-violet rays than the low-tension arc, and that the apparatus was a great deal simpler and much less expensive. The Finsen method had been improved by Finsen and by others. The Bangs lamp was one of the improvements. The trouble with the Finsen treatment was that it was adapted only to superficial cases, whereas the X-ray treatment was applicable to both superficial and deep cases. In using the ultra-violet rays it was absolutely necessary that the blood should be temporarily excluded from the part to be treated, and this was done in various ways. Ice apparently offered no obstacle to the passage of the ultra-violet rays. The X-ray was largely obstructed by glass, but not by the blood. If a piece of Willemite (silicate of zinc) were held in front of a lamp, and it became fluorescent, then one could be sure that the ultra-violet rays were present. The X-ray would do this to a slight extent only. The case of Dr. Bronson was also one in which it seemed to him the Finsen ray was less likely to do good than the X-ray. He

had been using the ultra-violet rays for two or three years, and had been curing some cases in a remarkable way, although he had not been aware at the time that he was using the ultra-violet rays. If anyone were interested in the ultra-violet rays, he would find an article in the *Lancet* of February 1, 1902, another in the *British Medical Journal* of January 4, 1902, and still another in *Münchner medicinische Wochenschrift,* No. 19, 1901.

Dr. Bronson said that he had seen the case shortly after the phototherapy had been stopped, and noted then a much more decided improvement in the side treated by the burr with carbolic acid than on that which had been exposed to the Finsen light. Since then he thought he saw an improvement also on this side, doubtless the result of the X-ray treatment.

Dr. Fox said he had taken what Finsen had written with some allowance, because he and others had claimed that smallpox could be so readily treated by red light, yet experience on North Brother Island had been entirely opposed to this. He did not believe that the Finsen treatment had been carried out properly in the case he had presented; nevertheless, he wished to say that he strongly objected to the tendency to seek after new methods of treatment while forgetting old and tried ones. His treatment with carbolic acid and the burr had long been known, though little used, and it had certainly acted well in this case.

A Case of Lupus Erythematosus Treated by the X-Ray. Presented by Dr. E. B. Bronson.

The patient was a man about forty years of age, strong in appearance and of good general health, who had had the disease for three years. There were three active patches on the cheeks, two on the left side and one on the right, besides two or three round atrophic lesions on the scalp, showing where the disease had probably healed spontaneously. Ten exposures had been made by Dr. Edward Bronson Findo, between September 25 and October 19, to the left side only. On October 23 both sides were exposed alternately, and this had been repeated only twice since. A rather hard tube had been used at from ten to eight inches distance, and with ten-minute sittings. The greatest effect was shown on the left side, and particularly in the patch nearest the nose, that had received the most direct action of the rays. Its erythema had completely disappeared and had been replaced by a rather deeply tanned border. There was no scaling nor other sign of activity, and to all appearances the disease at that point was healed. The patch farther back on the same side, though greatly improved, still showed evidences of the disease. On the other side, where but three exposures had been made, there was not yet much change.

Dr. Fordyce said that the literature was rather confusing regarding

the treatment of lupus erythematosus by the Finsen method and radiotherapy. This case had certainly been improved. He had recently seen a case that had become much worse under the X-ray treatment.

Dr. Winfield said he had had two cases of lupus erythematosus under treatment, and both had been cured by the X-ray. One case had no pigmentation; but the second had a good deal, though it had eventually cleared up completely.

Dr. Robinson said he had two cases of lupus erythematosus under treatment, one of them of long duration and involving the entire surface of both cheeks. The other case had existed only about one year, but was very acute, so that on the ear it looked like an acute eczema. Both cases had done remarkably well, but were still under treatment. No benefit had resulted from the older ordinary methods of treatment. The X-ray treatment of the first case comprised the use of a rather low tube, because the disease was superficial. He was unable to use the rays oftener than once in two weeks for an exposure of eight minutes. In the recent case a somewhat harder tube was used. The results in both cases were greatly superior to older methods. The production of a mild inflammation seems necessary for successful treatment.

Dr. Fox said there was no doubt about the improvement in Dr. Bronson's case, but he had seen just as much improvement from an application of mercurial plaster. He had seen a case recently, that had had many sittings for the Finsen light, and had not been in the least improved; yet by curetting the surface and applying lotio alba the improvement was very marked. He was interested in the X-ray treatment, but most of the reports were very meager and gave few cases and short periods of time. He was inclined to think too much had been claimed in some cases, and that the failures under X-ray treatment had not been reported.

Dr. Piffard remarked that, in his opinion, the X-ray had done very nearly all that had been claimed for it. Many photographs had been published.

Dr. Allen thought the result was very good for eleven sittings, and that a continuance of the treatment would lead to a cure. He had himself treated six cases of inveterate erythematous lupus. One was in a lady who had been treated by the Finsen ray without any appreciable result. Under a few X-ray treatments she improved very greatly, but was compelled to return to her home in the Far West before a cure had been effected. He agreed with Dr. Fox that older methods should not be given up, but in cases in which all the usual methods had been tried ineffectually the newer and more promising ones should be given a trial. In this case the lupus erythematosus involved the lower lip, extending upon the mucous membrane. The case had been nearly cured by X-ray treatment.

Dr. Sherwell, in support of a remark of Dr. Fox as to the cure of

lupus erythematosus by slight treatment, recalled one case of lupus erythematosus of the face occurring in a woman, a member of a Catholic sisterhood, and very typical in appearance; in fact, an exact picture of the plate in Duhring's Atlas. He applied a rather strong white lotion with most perfect result. The patient was under his observation for many years, and it had not returned.

Dr. Bronson said that he had been especially interested in the case inasmuch as at the beginning of the treatment with the X-rays he was very skeptical as to the result. Although cases of lupus erythematosus had been reported as cured by this treatment, in some of those cases at least he had felt sure that the disease was probably lupus exfoliativus, and not lupus erythematosus. With regard to the case presented it was unquestionably a typical lupus erythematosus, and he thought the result after only a month's treatment a surprising one.

A Specimen of Xanthoma. Presented by Dr. J. C. Johnston.

Dr. J. C. Johnston presented a tumor of the skin which had projected about one inch, and was two inches in diameter. By daylight it was distinctly yellow. He had made a diagnosis of xanthoma. A photograph was exhibited showing the xanthoma cells.

ABSTRACTS.

Lupus Erythematosus. Warde (British Journal of Dermatology, December, 1902), from a study of thirty cases of lupus erythematosus, concludes:

1. That lupus erythematosus is not a distinct pathological entity, but merely one instance of a common process, frequently met with in a certain class of individuals. Atrophic rhinitis being another example of a similar process.

2. That the essential, and in rare instances, the only symptom is a pernicious œdema, hard to remove and apt to produce degenerative and atrophic changes.

3. That this œdema is due to a paralysis and dilatation of the small blood-vessels, ending eventually in their degeneration and destruction, together with the granulation tissue that has formed round them in the endeavor to repair the damage.

4. That this œdema and vascular degeneration depends *indirectly* on a feeble circulation leading to a state of malnutrition of the vessel-walls, on a strain placed on the vessels by flushing, or on anatomical position, in that the skin is thinly stretched over unyielding parts; *directly* on exposure to heat and cold, injuries such as burns, and on the presence in the skin of various toxines due to poisons, certain fevers, microbic activity, and to unknown causes.

5. That the vascular degeneration and atrophy may be directly induced by certain superficial types of lupus vulgaris, and be predisposed to by a tubercular inheritance or by acquired tuberculosis, but that the lesions essential to the disease are in no sense tubercular.—M. B. Hartzell.

Three Cases of Creeping Larvæ in the Human Skin.

Van Harlingen (*American Journal of the Medical Sciences,* Sept., 1902,) reports three cases of this curious affection, the first to be reported in this country. The first case occurred in a girl, four years old, the eruption beginning upon the heel as a small blister, gradually extending upon one side while it healed upon the other. It extended in a serpiginous course up the inside of the foot, in front of the heel, terminating in a spiral over the internal malleolus. The lesion, which was about four inches long and a sixteenth of an inch wide, presented the appearance of a line of small vesicles, resembling a magnified scabies burrow. Treatment with an ointment of green soap and tar caused the disease to gradually disappear. The second case likewise occurred in a child, five years old. A flat, red, narrow line was present upon the sole of the foot, extending from one side to the other, resembling the edges of a circinate erythema. For some time there was no change in the appearance of the disease, but later it became raised and brighter red, the child complaining of pain. Within a few weeks the disease made considerable progress, extending up over the dorsum of the foot. An attempt to find the organism by cutting down upon the end of the furrow resulted in failure. The third case, which occurred in an adult, began upon the back of the hand as a small, red, itchy pimple which soon extended, taking a serpentine form and producing a cord-like elevation of the epidermis. In time it extended between the fingers, then diagonally across the palm of the land, terminating in a whorl over the wrist-joint. In this case also several attempts to find the parasite, by cutting down upon its course, were made without success.—M. B. Hartzell.

Benign Cystic Epithelioma.

Hartzell (*American Journal of the Medical Sciences,* Sept., 1902,) reports two cases of this infrequent and interesting disease presenting some unusual clinical features. The first case occurred in a woman, 80 years of age, as a dollar-sized patch of small nodules, situated upon the forehead, each nodule containing a small bluish-black dot in the center. The disease had commenced with a single nodule, spreading by the addition of new ones from time to time, and had lasted six or seven years. The second case occurred in a man, 38 years of age, who had six or seven dime- to half-dollar-sized patches of small nodules situated upon the upper part of the trunk, anteriorly and posteriorly. In both cases marked atrophic areas were present. Microscopical examination of the lesions showed numerous round, oval, and irregularly-shaped masses of epithelial cells containing cyst-like cavities. In sections mounted serially it was easy to trace the origin of these epithelial masses to the basal layer of the epidermis, and, in some instances, to the hair follicles. The author concludes, from a study of his own and reported cases, that there are probably three distinct affections which present lesions distinguishable from one another only by the microscope. First, benign cystic epithelioma, in which the lesions are usually, but not always, situated upon the face, and have their origin in the basal layer of the epidermis and the external root-sheath of the hair; second, cystadenoma, in which the eruption occurs upon the trunk, the tumors starting in the sweat-gland apparatus; and third, hæmangio-endothelioma, likewise situated upon the trunk, but originating in a proliferation of the endothelium of the bloodvessels.—H. W. Stelwagon.

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EDITORIAL.

LICHEN PLANUS AND LEUCOPLASIA OF MUCOUS SURFACES.

THE precise relation between lichen planus and leucoplasia of the mucous membrane of the mouth is evidently not completely established. The connecting links are generally recognized and accepted between syphilis, tobacco-usage, leucokeratosis buccalis, and carcinoma of the mouth; as also, when syphilis has been absolutely excluded, between tobacco-usage, leucokeratosis buccalis, and carcinoma of the same region. But what, if any, are the relations subsisting between the conditions last named and lichen planus of the mucous lining of the oral cavity?

In a case recently reported to the Société de Dermatologie et de Syphiligraphie (*Annales de Derm. et de Syph.*, Dec., 1902, p. 1152), by MM. Balzer and Faure-Beaulieu, there was detailed the case of a woman over fifty years of age, of neurotic temperament, the mother of six children, affected with what was described as "lichen ruber" of the scalp and chest. There were also bluish-white streaks upon the dorsum of the tongue, about one centimeter in diameter, with plaques upon the borders of that organ, and grayish striæ on the inner face of the right cheek and in the line of contact of the molar teeth. The mucous membrane of the lower lip was grayish and white. Considerable itching was experienced in the affected regions. The lesions were reported as resembling those of leucoplasia, though exhibiting less conspicuously the mother-of-pearl hue. There were flattened papules. No statement is made respecting the possibility of tobacco-usage, which is somewhat more common in women of the lower class in France than elsewhere.

In the discussion which followed, Darier described three varieties (?) of "lichen of the tongue," whatever that term may designate, viz., the reticular, the papular, and the diffuse. The vagueness of knowledge had on this subject may be inferred from the commentary

made by Fournier, who, in distinguishing between the two affections under discussion, admitted that he regarded the leucoplasias relieved by specific treatment as presenting a problem. "Doubtless these were lichens of this kind."

Some of us have had the opportunity of carefully studying a type case, that of a widow, sixty-five years of age, living a life of ease, but nervous, taxed by the long-continued illness of her deceased husband. Here there was no possibility of previous syphilis or of tobacco-usage. Numerous lesions of lichen planus of the skin, absolutely conforming to the classical features of that disorder, were present on the forearms and along the gluteal regions of the thigh. The dorsum of the tongue displayed groups of flat-topped, circumscribed, pin-head sized, circinate, and moist elevations, precisely similar to those exhibited on the skin of the body, except in the matter of moisture and slight secretion. There were few subjective sensations, the complaint being chiefly of annoyance in mastication. At one point where there had been confluence of the lesions, a narrow riband of whitish tissue extended parallel to the long axis of the tongue. There were absolutely no striæ on the inner faces of the lips or near the angles of the mouth. While the resemblance between this condition and that of leucokeratosis buccalis was somewhat suggestive, it was by no means striking; and the distinction between the two was evident on careful examination. The dry, lucent, mother-of-pearl effect seen in leucokeratosis was absolutely wanting. The lesions on the tongue, in fact, were easily differentiated from the several varieties of leucokeratosis of the mouth.

We have seen, however, coinciding with typical lichen planus of the body-surface, grayish-white areas, dry and moist, about the mons veneris and the vestibulum of the vagina of middle-aged and older women. The relations of these lesions to those upon the surface of the body, as also to the possibility of leucokeratosis occurring in the genital region, and, in fact, to the rare form of disease known as Breisky's kraurosis vulvæ, are not known.

It would seem that the questions involved demand a careful restudy, with biopsies of the tissue involved, in a series of cases. One of the obstacles to a complete demonstration of the nature of these cases is to be found in the rarity of unmistakable lichen planus of the mucous surfaces. J. N. H.

THE ETIOLOGY OF ACNE VULGARIS.

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In 1893 Unna discovered the presence of bacilli, which he called acne bacilli, in comedones and acne pustules. He did not obtain any cultures of the bacilli nor did he carry out any experimental investigations. Unna declared that comedones were due to a hyperkeratosis of the hair follicle and that this was caused by the presence and growth of the acne bacilli. He described the bacillus as being $\frac{5}{8}$ to $\frac{3}{4}$ μ long and less broad, and that it was a pus producer. He found the bacilli in all comedones examined, but not in all pustules, although he asserted that the bacilli were the probable cause of the non-essential suppuration in acne.

His grounds for believing that these bacilli were the cause of acne vulgaris were exceedingly slender.

In 1894 M. Hodara, a pupil of Unna, succeeded (?) in cultivating the acne bacillus from acne lesions. He used agar and glycerine as media. He planted the expressed contents of a comedo on agar, but did not succeed in obtaining a growth of the bacilli, although cocci and other organisms grew. By first soaking the comedo in absolute alcohol for two to four days and then planting on agar he succeeded in growing the bacilli. The description of the bacilli agrees with that of Unna's. A later observer, Bollack, was unable to confirm Hodara's results, as he always obtained a growth only of the staphylococcus albus. (The author could never get the bacillus to grow on agar.)

In 1896 Lomry carried out a series of observations concerning the cultures obtained from comedones and acne pustules. His results showed that stained sections of comedones revealed a rich flora of bacteria, most of which were cocci, and a few small bacilli, etc. Cultures were made on gelatine and agar. Lomry always obtained the staphylococcus albus in culture, never bacilli. He concluded that the staphylococcus albus was the cause of the disease and that the bacilli were a variety of the bacillus coli commune group.

In 1894 Sabouraud, in his investigations on seborrhœa, found that all comedones contained small bacilli. Sabouraud formed opin-

ions opposite to Unna. The former considered that seborrhœa was the primary disease and comedones secondary, whereas, Unna believed the reverse was the case. Sabouraud believed that the acne pustules followed the comedones as the result of secondary infection. This author also stated that a micro-bacillus, which is identical with Unna's acne bacillus, is the cause of seborrhœa. This bacillus is found in numberless quantities in all plugs squeezed out of sebaceous glands. He says the young forms of this bacillus are like a coccus, but the usual size is nearly 1 μ long and 1-2 μ broad; in some specimens it was as long as a tubercle bacillus. Sabouraud did not obtain pure cultures of the bacilli direct from comedones or seborrhœa plugs. He always got the staphylococcus albus as well as the bacilli to grow when using a special acid media made up of peptone, glycerine, acetic acid, agar and water. The bacilli were very slow in growing. To get the bacilli pure he allowed the culture from the comedo to stand two months when the staphylococci died and the bacilli continued to live. Another and quicker plan was to place the culture for 10 hours in an autoclave at a temperature of 65 to 67 degrees C.; this killed the cocci and only the bacilli would grow. He does not describe any branching forms of the organism. Other observers on the acne question did not view the bacterial origin with favor.

Up to 1899 no observer had succeeded in obtaining the acne bacilli pure from lesions of acne vulgaris or comedones, and there was practically no proof that these bacilli were the cause of acne vulgaris.

In May 1899 I presented a paper entitled, "A bacteriological and miscroscopical study of over 300 vesicular and pustular lesions of the skin *with a research upon the etiology of acne vulgaris*" before the American Dermatological Society. The results were as follows:

A special bacillus was shown to be present in all the smears from 96 pustules from 55 patients; 54 cultures out of 96 were sterile on agar, 11 gave a culture of a special bacillus on glycerine-agar, whereas 31 gave growths of staphylococcus (epidermis albus) on slant agar.

The pure cultures of the bacillus were best obtained chiefly from acne nodules. The lesion was washed first with green soap and carbolized water and then with 95 per cent. alcohol. The nodule was then opened with a sterile lancet and the first portion of the contents squeezed out was wiped off with alcohol; the remaining portion of the contents was expressed and transplanted *en masse* on glycerin-agar.

The clump gradually increased in size on the media, forming at

first a whitish soft, pultaceous, easily movable mass, which was smooth, moist, glossy and with a regular edge. The organism grew on blood serum, in glucose-agar in stabs (but without the formation of gas), in bouillon and very slightly on potato. Old cultures would gradually turn pinkish, then almost black.

The bacillus was described as a short, thick organism in the smears, but in cultures it became longer, thicker and branched. (Figs. 1 and 2.) Irregular staining was also noticed in older cultures. It does not decolorize by Gram's method. No capsule could be demonstrated. A few branching forms were found in the smears.

Successful inoculations in mice and guinea pigs were carried out. The animals died in about a week. Pure cultures of a bacillus were obtained from the different organs.

It was remarked that the results obtained seemed to justify the conclusion that the pustules and nodules of acne vulgaris were due, not to the invasion of ordinary pus organisms, but rather to the specific bacillus just described.

The name *bacillus acnes* was given to the micro-organism.

In 1900 L. Bollack carried out a number of investigations on this disease. Many times he got only the staphylococcus albus in cultures. By using Sabouraud's method he got cultures of the acne bacilli. Inoculation results were negative. Bollack does not believe that comedones are of bacterial origin but that the acne pustules are due to secondary infection of ordinary pus organisms.

In carrying out further observations on the disease I took up the following lines of procedure:

I. Confirmation of the results obtained in my previous investigation.

II. Excision of typical acne pustules and nodules in order to observe the histo-pathology more thoroughly.

III. To test whether the blood serum of patients suffering with acne vulgaris would agglutinate the *bacillus acnes* and so demonstrate the presence or absence of agglutinins produced by this organism in the blood of patients.

I. Typically marked cases of acne vulgaris, usually with nodular formations (acne indurata) present, were chosen in making these investigations. Lesions with distinct yellowish or whitish apices showing undoubted secondary infection with the ordinary pus organisms, principally the staphylococcus pyogenes albus, were not made use of. Acid glycerin-agar was again the medium used in making the cultures. All but two of the cultures were obtained from lesions on the

face. Cultures were taken from 145 lesions from 31 cases and the following results were obtained:—

52 yielded pure cultures of the bacillus acnes (the micro-organism which I have already described in my previous communication).

28 were sterile.

15 showed cultures of bacillus acnes and only a few colonies (2-12) of the staphylococcus epidermis albus.

29 gave cultures of bacillus acnes and numerous colonies of staph. albus.

21 yielded only cultures of staphylococcus albus.

In girls the cultures were far more apt to be pure than in young men.

The reason that so many cultures were sterile was because some media were not properly made.

Smears from all the lesions from which cultures were taken showed after staining, according to Gram's method, the presence of varying numbers of the *bacillus acnes.*

There were a series of nine cases (girls whose ages varied from 18-21 years) who all presented such typical examples of the chronic nodular or indurated form that I took cultures from many of the nodules. Pure cultures of the bacillus acnes were obtained from every lesion examined in one patient. She had the lesions on the face, shoulder and back and had had the disease many years. The majority of the lesions belonged to the indurated variety and there were many pitted scars scattered on the face. All the nodules were quite firm and even hard; all were attached to the overlying epidermis. The majority of them were about the size of a small pea. Some presented a purplish tinge, others were brownish red, whereas some were whitish, so that one could hardly detect the lesion with the naked eye, but could easily feel it. On opening these lesions and expressing the contents with the fingers a brownish-red gelatinous substance was extruded. If the nodule was of purplish tinge and the epidermis over it appeared soft to the touch, in fact assumed a slight fluctuant feel, then the contents would be more liquid, but still be of a brownish-red color.

In all cases of acne vulgaris, whenever the acne lesions are slow in forming, the indurated lesions assume all the characteristic features which have been just described in the above case. Sometimes the induration grows quite large, up to the size of a small bean and the contents still have that liquefied brownish-red appearance. Varying stages from the thick gelatinous substance to the very liquefied contents have often been observed. Small plugs of very small whitish clumps are

often noticed in the expressed contents of the nodules, and it is often from these clumps, which are probably masses of *bacilli acnes* that one obtains the pure culture of this organism.

In the series of nine cases just mentioned the following results may be mentioned:—

From Case II. 13 cultures were taken, which yielded 8 pure cultures of bacillus acnes, 1 sterile tube and 4 of bacillus acnes mixed with colonies of staphylococcus albus.

From Case III. 16 cultures were taken and 8 were sterile (owing to the media not being properly made), 6 gave pure cultures of bacillus acnes and 2 showed bacillus acnes mixed with staphylococcus albus.

From Case IV. 11 cultures were taken, which showed 6 pure cultures of bacillus acnes, 1 sterile and 2 of bacillus acnes and staph. albus.

From Case V. 11 cultures were taken, resulting in 4 pure cultures of bacillus acnes, 5 cultures of bacillus acnes mixed with staph. albus, 1 sterile tube and 1 pure culture of staph. albus.

From Case VI. 2 cultures yielded 2 pure cultures of bacillus acnes.

From Case VII. 3 cultures showed 2 pure cultures of bacillus acnes and one tube of bacillus acnes and staph. albus.

From Case VIII. 4 cultures gave 2 pure cultures of bacillus acnes and 2 of bacillus acnes and staph. albus.

From Case IX. the same results were obtained as in Case VIII. from 4 cultures.

Therefore, in these nine cases, 64 cultures from 64 lesions gave 32 pure cultures of bacillus acnes, 18 cultures of bacillus acnes mixed with staphylococcus albus, 11 tubes were sterile and 3 cultures gave only the staphylococcus albus. Of the total 31 cases 19 yielded pure cultures of bacillus acnes, 5 gave bacillus acnes mixed with staphylococcus albus, 6 were sterile and one patient, from which only one culture was taken, gave a pure culture of the staphylococcus epidermis albus.

From a cultural standpoint, therefore, if the results of these later investigations be added to the first series communicated in my previous paper, we have the following data:—

When only slant glycerine agar was used as a media, then pure cultures of bacillus acnes were obtained from 62 lesions, (chiefly indurated acne lesions) occurring in 29 patients.

28 cultures were sterile.

44 cultures gave growths of bacillus acnes mixed with a varying number of colonies of staphylococcus albus.

21 cultures showed only pure growths of the staphylococcus albus.

When only slant agar was used as the media then 54 cultures from 54 lesions were sterile and 31 cultures yielded pure growths of staphylococcus albus. Smears from all the 240 lesions showed the presence of bacillus acnes.

Judging from these data alone one would strongly suspect some distinct relationship between these bacilli, to which I gave the name bacillus acnes, and the disease acne vulgaris. As I have contended before, the presence of the staphylococcus epidermis albus in the cultures is either due to faulty technique or is a secondary invader into the lesion. As the result of these cultural observations one can know pretty well when a pure culture of the bacillus acnes will be obtained or when it will be contaminated by the character of the lesion and especially by the character of its contents.

With reference to the description of the morphology and cultural characteristics of bacillus acnes which I have already described in my previous paper I have nothing further to add.

Inoculation experiments have been tried again, but with unfortunate results, as either the animal died of some epidemic disease which occurred at the time or that the autopsy was delayed too much to be of use. More attention is being given to these experiments now.

II. *Pathological Histology of Acne Vulgaris*, especially the pustular and nodular or indurated variety.

Two typical indurated acne lesions were excised from the back and shoulder of the patient from whom pure cultures were obtained from every lesion examined. Both nodules were about the size of a small pea and both were apparently situated deep in the skin, attached to the epidermis and quite firm. Acne nodules which were situated on the forehead, temple, cheek and chin were excised from six other patients. Finally the brownish-red gelatinous contents which were squeezed out of one lesion were dropped into alcohol, hardened, and sections were made which showed a structure similar to that of the excised nodule.

By means of the sections taken from these seven cases of acne vulgaris, together with sections from an excised comedo, one can follow the process of formation of the acne nodule and especially of the pathological changes which take place in the skin when due to the presence and growth of the uncontaminated bacillus acne. A sec-

tion of the comedo which was excised is shown in Fig 3. As Unna has already pointed out, a comedo is due to a hyperkeratosis of the hair follicle. The follicle had become widely dilated and enlarged and was filled up with many layers of keratinised substance. The lining of the follicle consisted of an inner thick, horny layer, a thin granular and an outer (next to the corium) layer, corresponding to the rete of the epidermis. The sebaceous gland was pushed deeper down into the corium than normal and there was less of the glandular structure and more cells like epidermal cells; in fact it presented the appearance as if the change of the cells into glandular cells had been considerably retarded or stopped. There were some slight changes about the vessels below and around this comedo, consisting of collections of lymphoid cells, but no inflammatory reaction was noticeable.

The next stage was represented by a very small acne nodule in the center of which could be seen a small comedo; it was excised from the cheek. Sections of the nodule (Fig. 4) showed an exaggeration of the same process which caused the formation of the comedo, together with a distinct inflammatory reaction. This comedo was larger, deeper and broader than the simple comedo just described, but the lower portion had the appearance as if it had been ruptured. The contents of the comedo was made up of horny material and large numbers of polymorphonuclear leucocytes, together with nuclear detritus, which mass extended deep into the skin down into the fatty layer. There was no sign of any sebaceous gland; it apparently had disappeared. The greater portion of the lesion was circumscribed. By staining some sections according to Gram's method, bacilli acnes could be detected in fairly large numbers. Some inflammatory reaction was noticeable in the blood vessels in the deepest portion of the lesion and surrounding it. Numerous lymphoid cells, young connective tissue cells and some plasma cells were collected round the central inflammatory mass.

The next or third stage was represented by a fair sized acne nodule (small pea sized), which was also excised from the face. The nodule was quite firm and of a brownish-red or slight purplish color; it was raised above the level of the skin.

The sections showed still further downgrowth of the follicle, which extended three times as deep (obliquely, so that the deepest portion was almost level with the overlying epidermis) into the corium as the simple comedo described above (Fig. 5). The broadest portion of the follicle was four times broader than the simple comedo. A noticeable feature was also the marked hypertrophy of the wall of the follicle,

especially in the lower two-thirds. In the simple comedo the lateral walls were made up of about four or five layers of flattened epidermal cells, with an inner distinct granular layer, whereas in the striking condition of this third stage there are as many as fifteen layers of comparatively large, soft epidermal cells which show distinct prickles. The outer contour (next the corium) of this hypertrophied follicle is very irregular in the lower half, consisting in places of blunt projections into the corium, and the outer layer of cells are usually columnar. Many polymorphonuclear cells are scattered throughout this epidermis. The upper third of this follicle presents the characters of the comedo. The contents of this enlarged follicle is usually lost in making section, but it shows in the portions left, a mass of keratinised layers, numerous polymorphonuclear leucocytes, mononuclear cells, and nuclear detritus.

The whole corium surrounding the lower two-thirds of this hypertrophied follicle presents striking pathologic conditions. The lesion is made up of very numerous polymorphonuclear leucocytes, which preponderate so much in places that they present the appearance of a miliary abscess; there are also large numbers of plasma cells and numerous variously sized giant cells. In the region which is between the follicle and the overlying epidermis (the follicle extends obliquely in its deeper portions) large numbers of cells, apparently plasma cells, have undergone pigmentary degeneration. Similar degeneration could be noticed in cells scattered throughout the deeper portion of the lesion, i. e., underneath the follicle. The pigmentary deposits are quite noticeable in thick sections. Pigment granules and masses are also found between the cells. This pigmentation would explain the color of these acne nodules.

The pathologic process did not extend round the upper fourth of the follicle, but throughout the corium surrounding the hypertrophied follicle laterally and beneath, so that it distinctly invaded the subcutaneous tissue. Numerous dilated blood vessels and lymphatics were also noted throughout the lesion. There was no attempt at any formation of tubercles, although many giant cells were present. Many noticeable phagocytes were seen, containing masses of nuclear detritus. On staining sections according to Gram's method, numerous bacilli were seen in masses within the follicle and a few small clumps were found here and there throughout the lesion in the corium. The epidermis of the skin and neighbouring structures were unaltered and were practically normal. The blood vessels of the corium in the neighbourhood of the pathogenic processes were also dilated and showed chronic changes.

Sections from another excised nodule (IV.) showed more acute inflammatory reaction; the follicle was not nearly so large as in the nodule just described. The large numbers of mononuclear cells seemed to assume the character more of lymphocytes than plasma cells; the giant cells in the lesion beneath the follicle were well marked and fairly numerous; polymorphonuclear leucocytes were more numerous, but pigment cells only few in number. Below the follicle was situated a very large mass of bacilli (bacillus acnes), which were easily demonstrated by Gram's method of staining. The neighboring sweat glands and duct (lowest portion) were surrounded by masses of polymorphonuclear leucocytes. Blood vesssels in the lesion were numerous and dilated. There was marked hyperkeratosis of the follicle and numerous polymorphonuclear leucocytes were scattered through it.

In sections from another nodule (V.) the lesion presented features similar to the last two nodules just described with the exception that the deeper portion of the follicle had apparently ruptured, the contents being continuous with the lesion in the corium, and thus formed almost circumscribed miliary abscesses. Still another acne nodule (VI.), which was a very firm small pea sized non-inflammatory lesion, situated on the back, near the upper portion of the scapula, was excised. It was not easily recognized, but could easily be felt. The skin over it was apparently quite normal. Sections showed that the greater portion of the pathologic process was situated deep in the corium and in the subcutaneous tissue (Fig. 6). The upper portion of the follicle and corium was but little affected. The giant cells were remarkable for their number and size and being massed together, otherwise plasma cells, connective tissue cells and polymorphonuclear leucocytes formed the major portion of the lesion. Very few bacilli (bacillus acnes) were found throughout the lesion. No diplococci were found. Pure cultures of bacillus acnes were always obtained from lesions of this case.

The portion of contents which was expressed from a similar nodule on the face after being incised was hardened in alcohol and sections made. It showed similar structure to the deeper lesion situated in the skin, viz., giant cells, plasma cells, etc., etc. Clumps of bacilli (bacillus acnes) were seen after appropriate staining. Finally a larger nodule (VII.), which was excised from this same case, in the region of the shoulder, showed more inflammatory changes. (Fig. 7.) The nodule was clinically slightly inflamed and was painful. The pathologic process had extended very markedly downwards deep into the corium and subcutaneous tissue. The follicle was not widely

dilated and did not present very marked hyperkeratosis, so that there was no specially noticeable comedo surmounting the nodule. In the lower portion of the follicle it contained numerous polymorphonuclear leucocytes, which were also present in large numbers outside. The greater portion of the lesion was beneath the follicle and this formed a striking picture, consisting of numerous variously sized, quite noticeable giant cells, large numbers of polymorphonuclear leucocytes, which in two places were massed together so as to form what appeared to be two contiguous miliary abscesses. Many connective tissue cells were also present and numerous phagocytes containing nuclear detritus. Plasma cells were not nearly so numerous in this nodule as were found in other nodules. Bacilli acnes could be detected here and there in small clumps throughout the lesion, but they were not at all numerous. In the last two nodules bacilli were found in a few giant cells.

III. In order to find out whether the blood serum of patients suffering from acne vulgaris caused the bacillus acnes to agglutinate, seven specimens of blood were obtained from the lobe of the ear from six cases of this disease. The blood was drawn up into a glass bulb and after allowing it to stand for some hours, so as to coagulate thoroughly, the serum was withdrawn by means of a pipette. One drop of this serum was then added to certain definite quantities of sterile Dunham's solution, so as to make dilutions of 1-5, 1-15, 1-25, 1-30 and 1-50. A very small quantity on a platinum point of a one week old pure culture of bacillus acnes was thoroughly mixed with a quantity of Dunham's solution in a test tube so as to make a "suspension." One platinum loop full of the suspension was placed on a cover slip and one loop of the diluted serum was added so that specimens were made of dilutions 1-10, 1-30, 1-50, 1-60, and 1-100. These cover slips were placed on hollow glass slides and with the 1-6 objective (Leitz) one could then see the fairly rapidly moving colorless bacilli. These specimens were observed at various times off and on for 20 hours. After 15 hours definite clumping or agglutination was noticed in all the specimens in all the dilutions and after 20 hours the clumping was still more marked. It was noticed in general that the weaker the dilutions, especially in the 1-100, the more marked was the clumping of the bacilli.

Specimens of blood serum from 5 normal patients were tested in the same way as a control and the bacilli acnes showed a slight tendency to agglutination in the stronger dilutions, but in the dilution of 1-100 the agglutination was entirely absent.

SUMMARY.

The following results have been obtained in an investigation into the etiology of acne vulgaris (the data given include the results of my previous observations):

1. Definite bacilli, which I have already named bacillus acnes, were present in all smears taken from 240 typical acne lesions from 86 patients.

2. Pure cultures of bacillus acnes were obtained from 62 lesions (chiefly acne nodules) from 29 patients, 82 cultures being sterile (about 70 of these were sterile because the proper media was not used) and the remainder showed either a growth of bacillus acnes mixed with staphylococcus pyogenes or epidermis albus or the latter organism was in pure culture.

3. Sections of an excised comedo, of an early acne papule, of an acne pustule and of five acne nodules from six patients demonstrated the stages of the disease. The sections from the acne nodules showed quite profound changes extending deep into the corium surrounding in some nodules a magnified and markedly hypertrophied follicle. The lesion was made up of masses of cells, many giant cells, plasma cells, which were very numerous in some nodules, but not in others, their place being taken by lymphoid cells or connective tissue cells. Very many polymorphonuclear cells were also present and were massed in some sections so as to form miliary abscesses; numerous phagocytes were seen and also many pigment cells, especially in one nodule where they were in large numbers. The blood vessels were numerous and dilated. In one section a large group of bacilli acnes were situated deep in the corium beneath the follicle, but in most of the section only a few small clumps or scattered bacilli were found. Some of the giant cells contained bacilli.

4. Bacilli acnes have been shown to be pathogenic in mice and guinea pigs.

5. Bacillus acnes is present as a short thick bacillus in the smears, but in culture it often becomes much longer and thicker; and in old cultures assumes distinct branching forms. It grows when planted *en masse* on acid glycerine agar and forms a pultaceous easily movable mass.

6. By the clumping of bacillus acnes by the sera of patients affected with acne vulgaris it is to be inferred that a specific toxic body derived from the presence of the bacilli in the tissues is absorbed by the blood, resulting in the production of a specific agglutinin.

What deductions can be made from all these results?

It seems to be now definitely proved that this micro-organism, bacillus acnes, is the primary cause of acne vulgaris. The organism is always present in the lesions; pure cultures have been obtained direct from the lesions many times (62), it is pathogenic in animals and it has been demonstrated that the blood serum of acne patients agglutinates these bacilli.

It has occurred to me whether we are not taking a wrong view in considering the anemia, constipation, headache, coated tongue, etc., as always predisposing causes of acne vulgaris, whereas, these symptoms may be the result of the continued absorption of toxins from the enormous numbers of bacilli present in all the lesions. As far as the principle is concerned the disease can be compared with erysipelas. In erysipelas the streptococcus pyogenes invades the skin, an acute local inflammatory process is set up and the toxin is absorbed rapidly into the blood which causes the constitutional symptoms viz.: Fever, headache, coated tongue, constipation, loss of appetite, etc. We do not say that these symptoms are the predisposing causes of erysipelas, but that they are the result of the disease. So from analogy, although we are dealing with a much more chronic disease in acne vulgaris, it is not too much to infer that the accompanying symptoms may result from the continued absorption of toxin produced by the innumerable number of bacilli present in the acne lesions.

I do not deny that there are still predisposing causes such as age, diet, etc.; yet we know that patients who carry out all that is advised as to diet, regular bowels, appropriate internal and external treatment sometimes do not get cured for months or even years. The disease will persist and it often relapses. Acne vulgaris in its severer forms is a profound disease. I do not mean that it is a dangerous disease, but it is a disease which affects the whole system of young adults. Acne vulgaris must, therefore, be treated with respect and it must be handled with care and attention to all details therapeutically.

Previous to my first communication bacillus acnes had not been obtained in pure culture from acne lesions, neither had it been proved to be pathogenic in animals nor has the agglutination test been done before.

While these later investigations were being concluded, Sabouraud published (1902) an extended monograph on "Seborrhée, Acnes, Calvitie." As far as the acne question is concerned he repeats his former statements. He improves on his previous technique and is now able to obtain a pure culture of his microbacillus direct from the sebum plug by placing it on a sterile glass slide and then planting on his

special media. He does not describe any branching forms in the culture of his organism. I have seen a pure culture of his microbacillus, and to the naked eye it looks like my bacillus acnes, but it certainly is curious that he has not observed any branching forms. Sabouraud did not obtain a pure culture direct from the acne lesions, either pustules or nodules. In fact, he still asserts that these lesions are due to secondary infection by ordinary staphylococci (albus). He suspects that some acne lesions are caused by the microbacilli, but he could never prove it and he never found the bacilli to be a pus producer. Sabouraud believes that the comedo is caused by his microbacillus which he says is the same as Unna's acne bacillus. Sabouraud also fully believes that his organism is the cause of seborrhœa and of the alopecia following this disease.

He describes the pathology of acne lesions as well as the comedo and acne indurata he explains as being due to the invasion into the deeper structures of the staphylococcus albus. He also asserts that acne necrotica is due to the invasion of staphylococci.

Sabouraud believes that the alopecia following seborrhœa is caused by the toxins of his microbacillus. He apparently demonstrates this by inoculating rabbits, a sheep and a horse with a quantity of the toxin and cause the hair to fall out in fairly large areas.

Sabouraud makes no mention of the writer's investigations on acne vulgaris, published two years previous to his publication.

In comparing Sabouraud's results with my own, he asserts that his bacillus is the cause of seborrhœa, comedones and alopecia (seborrhœic), and that acne lesions are due to secondary infection by the staphylococcus albus, whereas I have demonstrated that the bacillus acnes is the cause of acne vulgaris by its constant presence in acne lesions (240), and by the obtaining of pure cultures of the bacilli from 62 indurated acne lesions, by its pathogenicity in animals, by its presence deep in the acne lesions (indurate), and lastly by the power of the blood serum of acne patients to agglutinate the bacillus acnes in dilutions of 1-100.

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Bibliography.

1. Unna. "Die histopathologie der Hautkr." Berlin, 1893.

2. M. Hodara. *Monatsheft. f. prakt. Derm.* 1894, Vol. i, p. 349.

3. Lomry. *Derm. Zeitschr.* 1896, III.

4. Sabouraud. *Annales de l'institut. Pasteur.* 1894

5. Gilchrist, T. C. *Transactions American Dermatolog. Assn.*, 1899, Jan. 1900; also *Johns Hopkins Hospital Reports*, Vol. ix.

6. Bollack, L. "Inaugural dissertation der medicin Facult." Kaiser-Wilhelm's-Universit., Strassburg, 1900.

7. Sabouraud. "Seborrhée, Acne, Calvitie." Paris, 1902.

DESCRIPTION OF PLATES.—Dr. Gilchrist's Article.

FIG. 1. Bacillus acnes as seen in a stained smear from the contents of an acne nodule. (Drawn with the aid of a camera lucida. Oil immersion lens —ocular No. 4.)

FIG. 2. Branching forms of bacillus acnes as seen in an old culture (pure) on glycerine-agar. (Drawn with the aid of a camera lucida. Oil immersion lens—ocular No. 4.)

FIG. 3. Section of a comedo. The hair follicle (H) is widely distended. The walls consist of flattened epithelial cells. The substance which makes up the comedo is formed by a hyperkeratosis of the inner layer of the hair follicle. S is the sebaceous gland.

FIG. 4. Section of a recent inflamed acne papule showing the distended hair follicle (H), the lower wall of which has ruptured. A and B indicate the points of rupture. The contents of the lower portion of the lesion consist of masses of polynuclear leucocytes and nuclear detritus (C), etc., practically constituting a minute abscess which has invaded the fatty layer (F) of the skin.

FIG. 5. Section of a dull reddish chronic, slightly inflamed acne nodule which was very firm, raised and excised from the face. The hair follicle (H) is remarkably hypertrophied and is cut obliquely in the section so that it is divided into two portions H_1 and H_2. In other sections of the same nodule the joining of the two portions could be traced. The walls of the deeper portion of the follicle are markedly hypertrophied. Large masses of cells, polynuclear leucocytes, plasma cells, lymphoid cells, connective tissue cells and giant cells (G), surround the hypertrophied follicle.

FIG. 6. Section of a very firm, small, chronic, non-inflammatory acne nodule which had apparently not involved the epidermis and was not inflamed. The hair follicle (H) was not much hypertrophied and the nodule appeared to consist mostly of a mass of cells, plasma cells, lymphoid cells, connective tissue cells, polynuclear leucocytes, and large numbers of giant cells (G), situated about and beneath the hair follicle. Pure cultures of bacillus acnes were always obtained from similar nodules from this case.

FIG. 7. Section of a firm, slightly inflamed pea-sized acne nodule. This section does not show the continuation of hypertrophied hair follicle from the epidermis downward, but only portions (H) are seen deep in the tissue. The nodule consists of quite deeply situated masses of cells similar to those seen in Fig. 6. Large numbers of strikingly noticeable giant cells (G) are present and the central portions of the masses present features of abscess formation (C).

Figs. 3, 4, 5, 6 and 7 have been drawn on the same relative scale.

PLATE XI.—To Illustrate Dr. Gilchrist's Article.



Fig. 1.



Fig. 3.

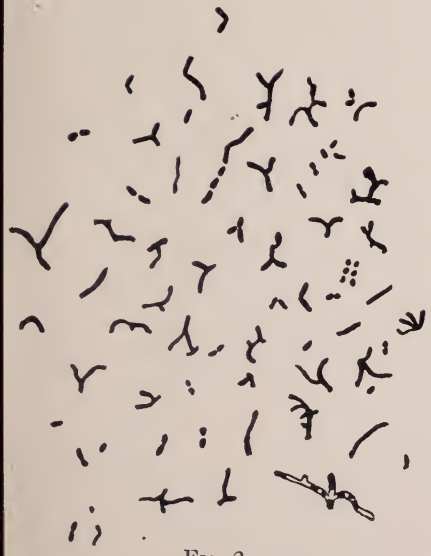


Fig. 2.

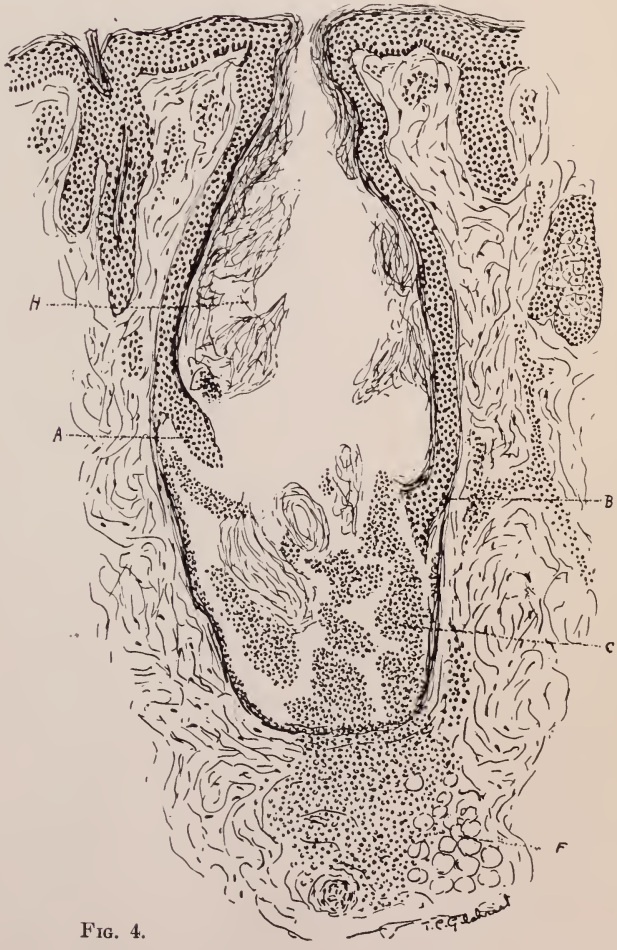


Fig. 4.

PLATE XII.—To Illustrate Dr. Gilchrist's Article.



Fig. 5.

PLATE XIII.—To Illustrate Dr. Gilchrist's Article.



Fig. 6.

Fig. 7.

REPORT OF A CASE OF SYSTEMIC BLASTOMYCOSIS, WITH MULTIPLE CUTANEOUS AND SUBCUTANEOUS LESIONS.

By Oliver S. Ormsby, M.D., and H. M. Miller, M.D.

(from the laboratory of drs. hyde and montgomery.)

FOR the privilege of studying and reporting this case, we are indebted to the Medical Staff of the Battle Creek Sanitarium, and we wish to express to Drs. Hyde and Montgomery, under whose direction this work has been done, our appreciation of their valuable advice and assistance. The autopsy was performed by Dr. Newton G. Evans, whose report is given below. Much important bacteriological work was done independently by Dr. Frank J. Otis, of the Battle Creek Bacteriological Laboratory, his report being also included.

The patient, E. J. T., was a Swede, aged 56, by occupation a machinist.

Family history: Owing to the fact that this man's relatives lived and died in Europe, little can be ascertained as to their history. The cause of death in both parents and five brothers is unknown. One brother is reported as having died of consumption.

Past personal history: The patient claims to have never been very robust. Of the diseases incident to childhood, he states that he had scarlet fever. He was married at the age of sixteen. For years he lived over a stable, and said that at times the odor from the manure which was piled immediately below his window, was almost unbearable. For the past ten years he has not felt strong, but was able to work until April, 1902. At this time he caught a cold, which settled in his chest. As a result, he coughed considerably and became so tired and weak that he was forced to quit work. After about six weeks his scanty expectoration was streaked with blood. He denies having suffered from night-sweats. Cod-liver oil was given, under which he improved sufficiently to return to work, though still weak. In June, or about two months after his illness began, a lesion appeared on the skin of the outer part of the right thigh. This ulcerated and discharged, and at the time of our first examination the lesion was not entirely healed. It measured about 1½ by ¾ of an inch, and showed a rather uneven cicatrix, and in places a dark, heavy crust. As this lesion appeared and largely cleared up before we saw it, we can only surmise that it developed and underwent a course

similar to that of other lesions later noted. One month after the appearance of this, another lesion developed on the right side of the nose. Two weeks later this was curetted by a surgeon and healed entirely, leaving only a depressed cicatrix. About the 1st of September, or four months after the beginning of his illness, he gave up work again. He complained of severe pain in his back, which made his spine so rigid that it was impossible for him to bend the body. When he entered the sanitarium this pain was very severe. He was pale, emaciated, and anæmic; had a poor appetite, coated tongue, and foul breath; the bowels were regular. He urinated frequently, and slept but little. The hospital record at this time shows that no sugar or albumin was found in the urine, and that a blood examination showed anæmia. Physical examination is reported to have detected no cardiac or pulmonary abnormalities. At that time, October 8th, two subcutaneous nodules were noted on the anterior and internal aspect of the right leg, one on the right arm, and one on the left leg. One week later (October 15th) a new crop of similar lesions appeared. During this period the record indicates that the daily temperature ranged from 100 degrees in the morning, to 103 degrees in the evening. October 20th, one of the nodules on the arm was opened and its contents evacuated, cultures being taken on blood-serum and sent to the Bacteriological Laboratory of the sanitarium for examination. From October 25th the patient was forced to remain in bed. He was now very weak, and on this date two lesions were evacuated and a quantity of pus admixed with blood was removed. The urine now was scanty and high colored; specific gravity 1016, and negative as to pus, casts, albumin, and sugar. Repeated examinations of his white, frothy sputum had failed to reveal any tubercle bacilli. On October 31st he was seen by one of us, through the courtesy of Dr. Hyde. At this time the general condition above mentioned was present. The patient was very pale and emaciated, had a temperature of 101 degrees, a respiration of 30, and a rapid, feeble pulse of 130. He had a slight cough. Physical examination of the lungs made by Dr. Ernest L. McEwen showed bronchial breathing and other evidence of pulmonary involvement. Slight adenopathy was noted. A large number of cutaneous and subcutaneous lesions were present. They consisted, in the main, of nodules, varying in size from that of a pea to that of a walnut. A large number were deeply situated in the hypoderm, and could only be found on palpation. Others had extended nearer the surface and could readily be seen, as the skin over them was elevated and they produced a dull, bluish-red

color in the area; while still others were somewhat darker in color and appeared boggy. They now closely resembled the lesions of the tuberculides. They were painless, and situated largely on the posterior and internal aspects of the legs. Some, however, were beginning to appear on the dorsum of the foot, on the thighs, on both arms and forearms, and on the face.

From one subcutaneous abscess on the left forearm, culture tubes of glycerine- and glucose-agar were inoculated with the tenacious, muco-purulent contents. No growth was detected on these tubes for three days, when the organism described below appeared. Dr. Otis also obtained, independently, pure cultures of the same organism from the tubes sent him about ten days previously. A few days later the patient was again seen, when a marked advance of the disease was noted. A large number of the lesions had extended to the surface and ruptured externally, leaving unhealthy-looking ulcers of various sizes. (Fig. 1) These, for the most part, were discharging pus and blood; had rough irregular edges and necrotic floors, some of them being covered in part or entirely with crusts. The nodules now present were nearly all soft to the touch, even when very deeply situated. Their color was dark-bluish, and in some instances almost black. They apparently contained blood as well as pus. On this date 93 lesions were present. One on the dorsum of the right hand was about the size of a twenty-five-cent piece. It was elevated about one-eighth of an inch above the surrounding skin. In its sloping border were numerous miliary abscesses. Its center was covered with a crust. This was the only lesion which assumed the usual characteristics of the cutaneous lesions described in these cases (see Montgomery, *Jour. Am. Med. Assn.*, June 7th, 1902, p. 1487), this peculiarity being due undoubtedly to the rapidity of the process. The lesions now, both nodules and ulcers, were fairly symmetrical, being distributed as follows: right foot, 3; right leg, 14; right thigh, 10; right arm and forearm, 11; none on the right hand; left foot, 3; left leg, 15; left thigh, 11; left arm and forearm, 12; left hand, 3; 4 on the face, 2 on the neck, 1 on the chest, and 4 on the buttocks. The distribution of the lesions was extensive, practically every region of the body being involved. One was on the plantar surface of the foot, one on the eye-lid, and a few were beginning in the scalp. The lesions on the palms and soles were naturally altered, owing to the anatomic structure of the parts involved. They appeared like deep, so-called "blood-blisters." When opened, however, the characteristic material escaped. Shortly after this, symptoms of laryngitis ap-

peared, as evidenced chiefly by voice alterations: first huskiness, which was followed by complete aphonia. This latter condition partially cleared up later. There was no pain, although ulcers were present in the larynx. As demonstrated at the post-mortem, these ulcers differed in appearance and location from those of tuberculosis. They were circular in outline, with smooth borders, not presenting a "worm-eaten" appearance. There were four on the epiglottis, one each on the left aryepiglottidean fold, the left ventricular band, and the right true vocal chord. From this time on until his death, which occurred on December 4th, the patient became gradually weaker. His daily temperature ranged from 99 degrees to 102.8 degrees; pulse 100 to 142, and respiration 20 to 38. He was drowsy, and took but little nourishment. New lesions continued to develop, especially about the head and face, some of these appearing like crust-covered tubercles, while others formed patches of various sizes. (Fig. 2) Toward the end, pains occurred in the limbs, and the conjunctiva discharged purulent material. This was kept clean with boric-acid solution. Antiseptic dressings were applied to the lesions, and prepared foods were administered. The last lesions rapidly formed crusts and did not develop into open ulcers, those on the face being smaller than those on the extremities. However, one subcutaneous abscess as large as a pigeon's egg developed over the right buccinator muscle. During the last few days a condition of either stupor or extreme restlessness prevailed. At the time of his death the body was practically covered with lesions. They varied from small, fairly superficial, crusted lesions on the face to ulcers as large as a half-dollar and subcutaneous abscesses as large as a hen's egg on the extremities. On November 21st five c.c. of Koch's new tuberculin was given. During the next eighteen hours his temperature rose one-half degree higher than usual. Five days later this was repeated, with no rise in temperature. As the temperature fluctuated before administering the tuberculin, this reaction was considered negative.

Histopathology of the cutaneous lesions: As the histological findings in the numerous cases of cutaneous blastomycosis have been so uniform, we will here only attempt to describe the histologic structure of one of the deeper lesions. On November 14th a biopsy was performed. The lesion selected was a deep-seated, slightly colored, bluish-red nodule, located on the right thigh. It was slightly elevated, was about the size of a coffee-bean, and was apparently located in the hypoderm. On excision it was found to contain some sanguineo-purulent material. It was fixed and hardened in alcohol, em-

bedded in paraffine, cut, and stained in various ways. As was shown clinically, the major part of the pathological process was located in the hypoderm. (Fig. 3) The epidermis was practically unaffected. Cornification was complete, and the only special change was the obliteration of the wavy line between the rete and *pars papillaris*. This was probably due to pressure from below. Some changes were present in the corium. Its vessels were dilated and showed perivascular infiltration, progressively more marked as the hypoderm was approached. The collagen was markedly œdematous, and in many places showed degeneration. In places the lower part of the corium had been invaded, but for the most part the infiltration was limited to the subcutaneous areolar tissue. Here the zones of infiltration were fairly well defined, and in these areas the lobes and lobules of fat and the interlobar septa had been destroyed and replaced by the infiltration. The infiltration was composed of enormous numbers of the organism, also leucocytes, red blood-cells, connective-tissue, plasma-, mast-, and giant-cells in varying numbers. The fact of the great number of the organisms present and their situation in groups, giant-cells, etc., was interesting. (Fig. 4.) Scattered throughout the area were numerous oval, oblong, circular, or irregular bodies, appearing like giant-cells. These varied in size from being only sufficiently large to contain one organism and having from four to eight eccentrically-placed, large vesicular nuclei, to some containing twenty or more organisms and having a large number of similar nuclei. These nuclei resembled closely those found in the ordinary Langham's giant-cell, but the protoplasm appeared somewhat different; in fact, the cell-protoplasm was hardly demonstrable, so crowded were the cells with the organism. No giant-cells were noted which did not contain an organism. In addition to these a large number of similarly-shaped collections of the organism were present, these appearing to be held together by some substance which took stains faintly, this substance extending slightly beyond the group. In these no nuclei were present, and they appeared to be pure agglutinations of the organisms into groups. These also varied greatly in size and shape. Whether this grouping was a part of the pathological process or merely an accident in fixing, is a matter of doubt. These agglutinations of the organism reminded one of the ovoid masses of lepra-bacilli which are discharged from leprous ulcers. In addition to these two locations the organisms occurred throughout the infiltration in pairs and singly, even at times extending into the corium. Numerous budding forms were everywhere noted. A large

number of them contained basophylic granules, which were stained red with Unna's polychrome methyl-blue. Often in giant-cells some of the organisms would be thus stained, while others showed no stain; but the nuclei took the usual blue part of the stain. These red protoplasmic granules varied from mere specks to quite large clumps. A similar observation was made in 1898 by Gilchrist and Stokes.[1] With hæmatoxylin and other stains, the same tendency for some of the organisms to remain unstained while others took the stain was noted. While the different component parts of the infiltration were more or less intermingled, the center seemed to be composed largely of the collections of the organisms above noted, leucocytes, especially polymorphonuclear, and red blood-cells. Around this the giant-cells and connective-tissue and plasma-cells were more abundant. At the upper or corium side of the zones, numbers of cells, which seemed to be detached nuclei from collagen bundles, could be seen, which had irregular prolongations of protoplasm, and which seemed to be trying to develop into collagen again.

Cultures: On October 31st two tubes of glycerine-agar and one each of glucose- and agar-agar were inoculated from a subcutaneous abscess on the left forearm. No growth was detected for about three days, when pure cultures of the organism appeared. On November 14th, six more tubes were inoculated from a deep nodule near the groin. These showed results similar to those in tubes previously inoculated. At the post-mortem, on December 5th, fourteen tubes were inoculated from lesions in the lung, liver, kidney, spleen, from the heart-blood, pleural and pericardial fluids, and also from a large subcutaneous abscess near the left elbow. The organism grew on all the tubes except those of the heart-blood and the fluids of the pleural and pericardial cavities. Its growth was fairly uniform. On glycerine-agar it was always more moist. The cultural characteristics, so far as observed in this organism, conform closely to those described by Montgomery (*Jour. Am. Med. Assn.*, June 7th, 1902, p. 1487); that is, on agar-agar or glucose-agar (Fig 5) there is a white, fluffy growth, with aërial hyphæ. In this the mycelium is finer and the circular organisms less numerous. On glycerine-agar (Fig. 6) the growth is more pasty, forming folds and depressions. In the latter the mycelium is thicker and contains numerous sporules. Oval and circular organisms containing sporules are also numerous.

Fresh preparations were made immediately after the post-mortem. The material selected was either pus from the small, tubercle-like lesions or the small tubercle, mounted in one-per-cent. potassium

hydrate solution. (Figs. 7-8-9.) The organism was found in enormous numbers in all the preparations from the lungs, liver, spleen, kidneys, peritoneal and pleural nodules, and also from the ulcer in the larynx. The organism was, as usual, double-contoured, and contained refractive bodies varying greatly in size. These bodies or sporules were also numerous outside of the capsules. Budding forms were very numerous. The organism varied in size from eight to fourteen microns; the buds from two to eight microns. Many of the capsules were empty; some were collapsed and appeared crescentic in shape. Smears of the pus were made from all of the above-mentioned situations and stained for tubercle-bacilli. Repeated examinations failed to reveal any bacilli, especial attention being paid to the smears from the lung, where one would naturally expect to find tubercle-bacilli abundantly. A guinea-pig inoculated with a bit of lung tissue died in three days from septic poisoning. Another, inoculated at the same time with a mesenteric nodule, is (sixty days since) living, and shows no evidence of tuberculosis. Two guinea-pigs inoculated with pure cultures from the original tubes show only local lesions at the point of inoculation. *Sections cut and stained from the several organs and tissues above mentioned uniformly showed enormous numbers of the organism. The lungs were largely destroyed, hardly enough of the lung tissue remaining for its identification. In the liver (Figs. 10-11) abscesses of various sizes were noted, each containing the organism in large numbers. The spleen, like the lung, was largely destroyed. The kidney contained abscesses similar to the liver, but not so abundant. The section from the ulcer in the larynx also showed the organism abundantly. A large number of sections from all of these organs and tissues were stained for tubercle bacilli, but none was found.

DR. FRANK J. OTIS' BACTERIOLOGICAL REPORT.

"December 5th, at the autopsy, cultures were taken from the heart-blood, pericardial fluid, right and left lungs, liver, spleen, beneath the pleura, and from one of the kidneys, also from the abscess near the left elbow. A pure culture developed in the tubes inoculated from the spleen, liver, kidney, from beneath the pleura, and from pus from near the left elbow. Staphylococcus pyogenes aureus and bacillus coli communis were observed as well as blastomycetes in the

*Specimens were taken from this case for preservation in the pathological laboratory of the University of Chicago.

cultures from the lungs. Hanging-drop slides were made from tissue from the liver, spleen, and lungs, and the blastomycetes were observed in varying quantities in all of them. They were also observed in the solutions of teased tissue with which the animals were inoculated. The yeast-like cell has been observed to divide and later produce mycelia. Tubercles were taken from all the different organs, crushed, and examined for tubercle bacilli. Although hours were spent in this search, the results have been entirely negative. The original cultures were made on glycerine agar-agar, and although they have been incubated for seven weeks there is no growth of the tubercle bacillus. Animals were inoculated as soon as the laboratories were reached. Ten guinea-pigs were used. They were inoculated with teased material from the liver, lungs, and spleen, the inoculation being subcutaneous or intraperitoneal. The following morning, two inoculated with material from the left lung and one inoculated with material from the spleen died of coli-communis infection. One that was inoculated subcutaneously from material from the spleen died a little later from the same cause. The other animals developed either an ulcer or a nodule at the point of insertion of the needle or where the pocket was made. There is a central area covered with a black crust. The skin immediately around the ulcer is indurated and somewhat lobulated, and the hair has completely fallen from the surface. This area around the central ulcers is from three to fifteen mm. wide. Nearly all the ulcers are oval, and longer antero-posteriorly. From one of the ulcers there developed an indurated process extending from the ulcer forward to the base of the neck, the micro-organisms having evidently followed along the lymphatics.

"About a week after one of the animals was inoculated, it developed what was taken for a subcutaneous abscess, one end extending posteriorly from the point of inoculation. Fearing accidental infection, this was opened and drained. Instead of pus, there exuded several c.c. of a bloody fluid. In this there was very little pus, but blastomycetes were present. Later, the whole area became indurated and an ulcer developed.

"Two rabbits were also inoculated intravenously. They are both alive, but have lost a little in weight.

"One of the guinea-pigs died January 4th, twenty-eight days after inoculation. January 12th another died, thirty-two days after inoculation. On each succeeding day another died until the number was exhausted. No thought was taken of their dying in such rapid succession until one that had recovered, except for a small nodule at the

site of inoculation, died also. The possibility of a secondary infection producing some lesion was considered. A congested appearance in the axilla and about the superficial hypogastric artery suggested it. Cultures from the internal organs gave no growth, but a culture taken from near Poupart's ligament developed strepto-bacilli, which grew very meagerly. The internal organs did not furnish morbid symptoms.

"The lesions varied considerably. There was considerable inflammation about the ulcer which developed in all but one pig. Two animals developed pin-head sized foci in the liver; in another there was only congestion. The tubercles observed in the liver were devoid of connective-tissue proliferation, thus resembling those in the human organs. The spleen usually appeared normal. In one pig it was twice the normal size. In another there was a paler area about one-fourth the size of the organ. The lungs were sometimes congested. Twice there was found a pin-head sized, quite gray focus, with an area of congestion about it. Once in the stomach-walls were observed seven small, round, reddish infarcts or beginning ulcers one mm. in diameter. An ulcer of the duodenum was noted. The heart and the kidneys always appeared normal. No general peritonitis was found and no enlargement of the mesenteric glands. Inflammation of the costo-cartilage junction and arthritis each occurred in one animal. One hemorrhagic subcutaneous lesion similar to those observed beneath the human skin was seen a little distant from an ulcer. In one animal there appeared a bean-sized tubercle in the flank, from which many blastomycetes were taken and pure cultures grown. Pieces of tissue removed from the bottom of the ulcers and crushed beneath cover-glasses showed sago-like areas, suggesting that were it not for the crusts covering the ulcer, pin-head abscesses might be detected. The foci of necrosis have been in every instance crushed and examined for tubercle-bacilli, but none has been found. The cultures made from the first animal that died are over three weeks old, yet no tubercle bacilli can be found by staining the material from these cultures. A guinea-pig inoculated two weeks later than the above animals with sputum containing tubercle bacilli, died at the same time with the others, and the bacillus was found in the spleen and liver. Cultures were made, and the tubercle bacillus can be readily demonstrated in these cultures. So it is quite conclusively proven that there is no tubercular etiology in this case.

"From the five animals that lived to the completion of the work a pure culture of blastomycetes was obtained near the initial lesion

from four of them. In one animal that had tubercles in the liver a pure culture of blastomycetes was obtained from both the liver and the spleen. The micro-organisms existed in such small numbers in these centers of necrosis that they were observed but once in the crushed specimen. Three cultures were taken from the liver, but the blastomycetes developed in only one. So, if a large number of cultures had been made, it is quite probable that the micro-organism would have been found in a larger number of the internal organs. The micro-organism has certainly fulfilled the laws of Koch, except that the animals were inoculated with material from which pure cultures had been made instead of being inoculated with the pure cultures.

"The examination of the tissue sections from the animals is still incomplete, but so far the micro-organism has not been observed to produce mycelia in the tissue. The yeast-like cells vary largely in size and may assume a decidedly oval form. Pure mycelia have been placed in hanging-drop culture, where, in about a month, they have produced spore-like bodies identical with the forms observed in tissues. The cells from the tissue have been seen to divide and afterward to grow mycelia, so that the complete cycle has been observed in culture. There is a good prospect of developing all of the biological forms from a single cell that was obtained from the case."

The work is incomplete, and space will not permit any further mention at the present time.

DR. NEWTON G. EVANS' REPORT OF POST-MORTEM EXAMINATION.

Thoracic cavity:

Heart. Weight of heart, 8½ ounces. The pericardium and heart were practically normal in appearance.

Pleural membranes. There was a complete adhesion of both lungs to the chest wall and diaphragm. In many places the visceral and parietal pleuræ separated quite readily; in others the adhesions were more firm. The adhesions were partly fibrinous, but for the most part organized; but the fact that the separation was easily made seemed to indicate that the process was comparatively recent. Over the anterior portion of the right lung the changes in the pleura were most marked. When the lung was separated from this portion, a nodular membrane was left on the costal wall, the nodules being whitish, and many nearly as large as peas.

NOTE.—A rabbit and a guinea-pig were inoculated with a bouillon culture of the bastomycetes that was obtained October 19th, when the diagnosis was first made. The guinea-pig developed a white scar. Both animals are still alive.

Lungs. The lungs are large and do not collapse. Anthracosis very marked. The lung tissue is solid and firm throughout, seemingly made up of light but not distinct color. Crepitation present throughout, and the lungs float in water. The weight of the left lung was one pound twelve ounces; of the right two pounds one ounce. On cut section much blood exuded. In a very few places a small drop of purulent fluid escaped. The peribronchial lymph nodes are large and very dark colored.

"Abdominal organs:

Liver. Normal color. Rather small in size; weight, two pounds fourteen ounces. Scattered over the surface just beneath the capsule are numerous small, pin-head sized, yellowish-white nodules. On cut section it has the appearance of nutmeg liver, and nodules are scattered about similar to the surface nodules.

Spleen. Weight, five ounces. Scattered on the surface are large, raised areas of small, whitish nodules. The cut surface shows the same nodules, and the entire organ is much affected. (Fig 12.)

Kidneys. The kidneys were similar to each other. The left weighed six ounces; the right, five ounces. The capsules were slightly adherent. Tissue light colored. A few small nodules, similar to those in the liver, were found on the surface and in the substance of the kidneys.

Pancreas. Appeared normal on gross examination, but with the microscope showed similar lesions to the other abdominal organs.

Stomach and intestines. These organs were practically normal. The mesenteric lymph nodes were swollen.

The mucous membrane showed numerous small, round ulcers, with raised edges.

"Microscopic examination:

Lungs. The tissue of the lungs is more extensively affected than that of any other organ. A large portion of the pulmonary tissue is so altered by the presence of countless multitudes of the parasites that it is scarcely distinguishable. The inflammatory process is principally productive and necrotic, showing scarcely any exudative phenomena. The almost complete absence of purulent exudate in the lung was also shown at the autopsy. There is a marked increase in the amount of connective tissue, and in places the new-formed connective tissue is crowded with small, round cells. Scattered throughout the connective tissue are comparatively large numbers of mast-cells. A few of the mast-cells are situated within the peculiar

giant-cells described later. There are also large numbers of plasma-cells. The epithelium of the air-sacs has for the most part disappeared. Desquamated epithelial cells can be seen in many places, and these often contain pigment granules.

The large giant-cells are a characteristic element of the pulmonary lesions. They vary greatly in size, from twenty to thirty microns in diameter up to ten times that size. They all contain parasites in different stages of development, and the larger forms contain large numbers, the cell nuclei being few and indistinct, while in the smaller giant-cells the nuclei are prominent and numerous.

Large masses of parasites occupy some areas, the tissue in those areas seeming to be completely displaced by the growth of these colonies. Scattered among the parasites of these colonies is a considerable amount of granular detritus; and there are many areas of this granular material containing large, deeply-staining granules. The large amount of brown pigment contained in the fixed and the wandering connective-tissue cells, in the leucocytes of the blood, the endothelium of the blood and lymph channels, and the epithelial cells of the air-sacs is very characteristic. The pleura is covered by a layer of new-formed connective-tissue, containing many parasites.

Kidneys. The lesions in the kidney are relatively few and resemble very little the lesions of any of the recognized granulomata. They are small, and characterized by the great numbers of parasites which they contain and the small amount of inflammatory reaction. They contain a small amount of new-formed connective tissue, a very few polynuclear leucocytes, and many small, round cells and connective-tissue cells. There seems to be scarcely any attempt at encapsulation of the lesion. There are a few giant-cells, containing the parasites, in the lesions. A slight degree of cloudy swelling is seen in the renal epithelium, and numbers of the glomeruli have undergone hyaline degeneration, and some amyloid degeneration.

Liver. The lesions in the liver are small and numerous. They are quite similar to the kidney lesions, but contain more pus-cells and less connective tissue. The parasites are seen to be penetrating the surrounding tissue. The lesions are situated for the most part at the periphery of the hepatic lobules.

Spleen. The lesions in the spleen seem farther advanced than in the other abdominal organs, and the parasites are diffusely scattered throughout the tissues. There are numbers of areas of necrosis containing granular detritus. There are large amounts of degenerated hæmoglobin scattered throughout the tissue.

Pancreas. In the pancreatic tissues are seen a few small lesions, similar to those in the kidneys.

Trachea. The lesions of the trachea show the characteristic parasites.

"A very prominent characteristic of all the tissues is the presence of small granules of pigment of a brown color, which is deposited in the usual places of pigment which has originated in the blood. The origin of this pigment is probably the degenerated hæmoglobin.

"The distribution of lesions indicates without doubt that the parasites have been disseminated by the blood. It is a systemic infection, probably originating from the lesions in the lungs.

"Careful examination reveals no indication of any tubercular process, none of the characteristic lesions being found nor any tubercle-bacilli in any of the organs."

Differential diagnosis. The cutaneous clinical manifestations of the case under consideration in many points resemble those of a class of diseases now described as tuberculides, and which by many are believed to be of tuberculous origin. In these latter affections the course of the disease is chronic, lasting for months or years. There is a successive formation of nodosities, commencing in the hypoderm, and usually extremely indolent. These either undergo regression with atrophy, or gradually extend to and involve the superficial layers of the skin in a chronic inflammatory process. They finally undergo necrosis, with discharge of puriform contents, or ulcerate. Here, it is true, we had to do with a somewhat similar process, but much more rapid. Instead of months or years, days or weeks only were needed for the formation of subcutaneous nodules and their subsequent evolution into open, freely-discharging ulcers, the process being comparatively rapid. Some of the lesions completed their involution from a deep, invisible, hypodermal nodule to an open ulcer in less than two weeks' time. The very extensive distribution of the lesions, also, has not been noted in any reported cases of cutaneous tuberculosis. Under various names, tuberculous affections having the course above described, have been noted to involve the face and arms and limbs; but the course was always slow, and the new formations were undergoing evolution so that one might see the healed cicatrices of older lesions. In this case only one lesion healed, and that did so after curettage.

Histologically, also, marked differences are noted between cutaneous tuberculosis of internal origin and the present case. Aside

from the enormous numbers of the organism found in every section, which in itself is most important, one sees principally the changes incident to the acute abscess formation. The processes begin similarly by cellular hyperplasia about the vessels in the hypoderm or cutis; but in the tuberculous cases the vessels show marked proliferative changes in their walls. The cellular hyperplasia increases, extending upwards, destroying slowly the normal structures found in the situation, and producing its own characteristic structure. This hyperplasia is composed of typical Langham's giant-cells, plasma- and mast-cells, connective-tissue cells, and a few leucocytes. In the present case the infiltration rapidly increases and extends upwards, producing great œdema and speedy destruction of the overlying structures, until, rupturing externally, it produces the ulcer. The infiltration is composed largely of the organism and leucocytes. The former is present in enormous numbers and is rapidly proliferating, as is shown by the great numbers of budding-forms. Giant- and multinuclear-cells are also fairly numerous, and they usually contain the organism more or less abundantly. A few plasma-cells were present, also some small mononuclear cells. Mast-cells were more or less numerous, these being distributed far from the markedly affected region. So that one sees at a glance very little in common in the histological architecture of the two conditions.

Other cases. Two other cases of systemic infection with blastomycetes have been reported. In 1900, in a case reported by Montgomery,[2] which was further reported in 1902 by Walker and Montgomery,[3] general infection with blastomycosis followed a cutaneous lesion of seven years' duration. When the disease became systemic, successive crops of sub-epidermic nodules occurred, but these were subacute in type, were limited to smaller areas, and were not so destructive. Blastomycetes were found in the lung, which, unfortuntely, was the only obtainable tissue from the internal viscera; otherwise, points of similarity might have been noted throughout the various organs at the autopsy. In our case we believe the order was reversed, as the cutaneous lesions followed the systemic infection. The process also was more rapid, and the lungs were probably the original point of infection.

In 1894 Busse[4] reported a case which has since been further reported by Busschke,[5] in which both cutaneous and visceral lesions showed an organism which now is classed with the blastomycetes.

DESCRIPTION OF PLATES.—Drs. Ormsby's and Miller's Article.

Fig. 1. *Photograph. Taken five weeks before death, showing nodules and ulcers on limbs.

Fig. 2. Dr. Otis' photograph taken post-mortem, showing crust-covered lesions and patches on face.

Fig. 3. Microphotograph. Cutaneous section, showing area of infiltration beginning in hypoderm. Low power.

Fig. 4. Microphotograph. Cutaneous section—higher magnification of Fig. 3—showing group of giant-cells containing the organism. (X 600.)

Fig. 5. Photograph. Growth on glucose-agar twenty-one days old from miliary abscess in spleen, showing white, fluffy appearance.

Fig. 6. Photograph. Same as Fig. 5 except that the culture is on glycerine-agar and is more moist, wrinkled and pasty.

Fig. 7. Microphotograph. Smear from tubercle-like lesion in lung, mounted in one per cent. potassium hydrate and glycerine, showing the organism abundantly. (X 350.)

Fig. 8. Microphotograph. Same as Fig. 7, except that the smear was taken from the liver. (X 1000.)

Fig. 9. Microphotograph. Same as Fig. 7, except that the smear was taken from the spleen. (X 1000.)

Fig. 10. Microphotograph. Section of liver showing miliary abscesses crowded with the organism. Low power.

Fig. 11. Microphotograph. Higher magnification of Fig. 10, showing one edge and a part of the abscess. (X 350.)

Fig. 12. Dr. Evans' photograph. Cut section of spleen showing areas of infiltration.

*The above photographs and microphotographs, unless otherwise noted, belong to Drs. Hyde and Montgomery, to whom we are indebted for the privilege of using them.

PLATE XIV.—To Illustrate Drs. Ormsby's and Miller's Article.



Fig. 1.



Fig. 2.

PLATE XV.—To Illustrate Drs. Ormsby's and Miller's Article.

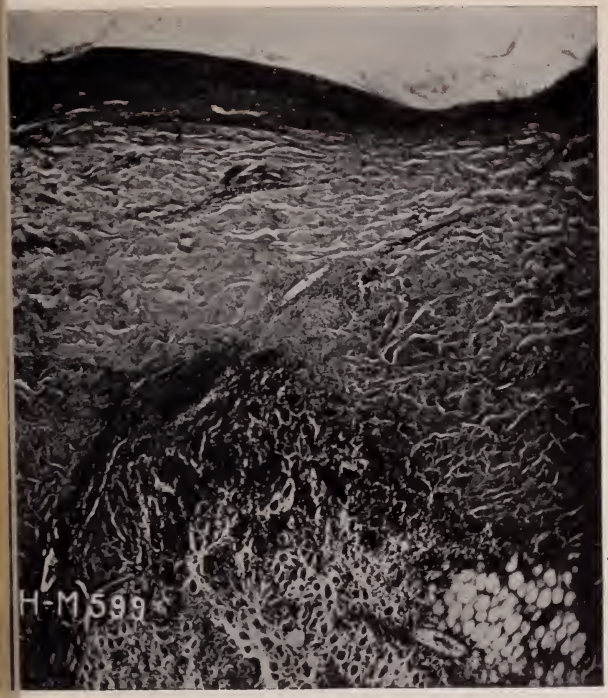


Fig. 3.



Fig. 5.

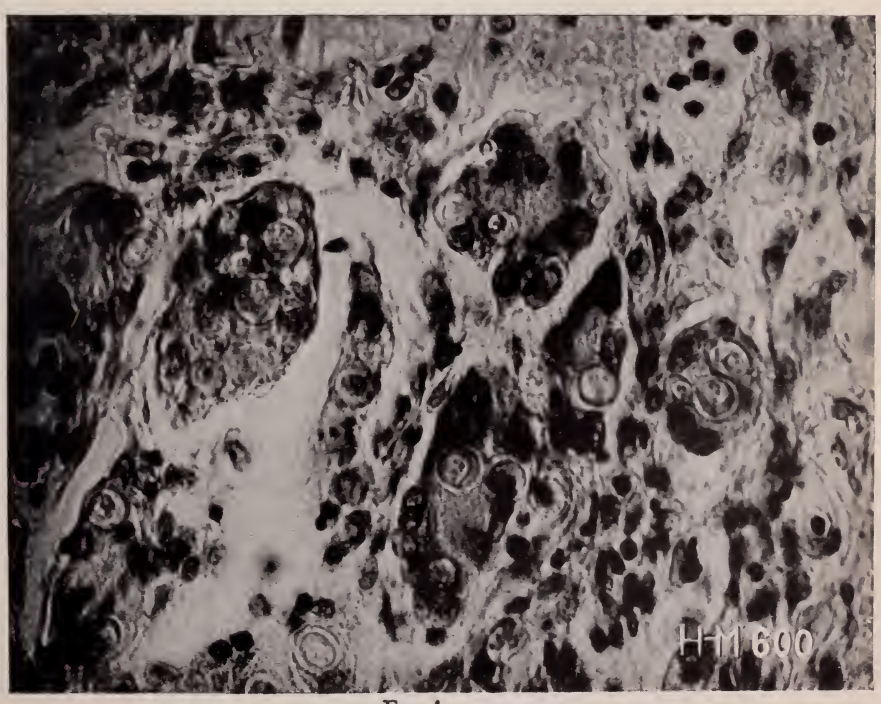


Fig. 4.

RESUME AND CONCLUSIONS.

(1) The first evidence of the illness which ended fatally in this case was exhibited in the lungs. (2) Early general toxemia was present, as evidenced by fever, weakness, emaciation, etc. (3) The cutaneous manifestations began two months after the initial illness, and were manifestly of internal origin, coming by way of the circulation. (4) These lesions comprised subcutaneous and cutaneous nodules and abscesses, open and discharging or crust-covered ulcers, and were extensively distributed, being as a rule smaller about the head and face and larger on the extremities. The trunk had comparatively few. (5) Pure cultures of blastomycetes were obtained from the subcutaneous abscesses before death and from various tissues and internal organs post-mortem. (6) Microscopic examination of both the internal and external lesions and the sputum failed to show any tubercle-bacilli, but all showed enormous numbers of blastomycetes. (7) Animal experiments were negative as to tuberculosis. (8) Tuberculin-reaction was negative. (9) Post-mortem examination revealed lungs riddled with miliary abscesses and tubercle-like lesions, the pleura studded with nodules, the liver extensively filled with miliary abscesses and tubercle-like nodules. The kidney was similarly affected but not so extensively. The spleen was markedly affected, some portions being practically destroyed. The mesentery was studded with the nodules. In all these situations blastomycetes were demonstrated microscopically and culturally, but tubercle-bacilli were found in none. (10) The early lung involvement and other symptoms, the laryngitis, the microscopic appearance of the organs, and the patient's family history, all suggested tuberculosis. (11) The absence of the tubercle-bacillus, culturally, microscopically, and experimentally, the negative tuberculin-reaction, the absence of the usual microscopic tubercular architecture, the failure to reproduce tuberculosis in animals, the extraordinary number and rapid evolution of the cutaneous lesions, and, lastly, the abundance of the blastomycetes in every lesion, rule out tuberculosis.

BIBLIOGRAPHY.

[1]T. Casper Gilchrist, M.R.C.S., and William Royal Stokes. Baltimore. "A Case of Pseudo Lupus Vulgaris Caused by a Blastomyces." (*Jour. of Experimental Medicine*, Vol. III., No. 1, 1898.)

[2]Dr. Frank Hugh Montgomery, Chicago. "Three Cases of Blastomycetic Infection of the Skin, One Case Limited to a Tumor of the

Lower Lip (Pathological Report in the first two cases by Dr. Howand Taylor Ricketts, of Chicago.)" (*Transactions of the American Dermatological Association*, 1900, p. 189.)

[3]James W. Walker, M.D., and Frank Hugh Montgomery, M.D. "Further Report of a Previously Recorded Case of Blastomycosis of the Skin: Systemic Infection with Blastomyces: Autopsy." (*Journal of the American Medical Association*, April 5th, 1902.)

[4] [5]Busse-Buschke-Virchow's Archiv., 1895, Vol. CXL., p. 23; Verhandl. der Deutschen Dermatologischen Gesellschaft: Sechster Congress, 1899, p. 181.

ACNE AND ITS TREATMENT.

By George Henry Fox, A.M., M.D.

(Read before the American Dermat. Assn., Boston, Sept. 19, 1902.)

ACNE, according to the strict definition of the term, is an inflammatory affection involving the sebaceous glands. But it is so commonly associated with either a hypersecretion or an obstructed condition of these glands, that it is impossible to present a clinical picture of acne without taking into consideration the comedo and the seborrhœa oleosa, which are usually described in text-books as distinct affections.

The various conditions or functional disorders of the glandular apparatus which are associated in nearly every case of acne, depend primarily upon a sluggishness or lack of tone in the affected skin. They are usually aggravated by an imperfect digestion, a poor circulation, or by any cause which depresses the vital activity of either mind or body.

These predisposing causes of acne are innate and often hereditary. In many cases they simply cause what is commonly known as a poor complexion or an unhealthy skin. The line of demarcation between this condition and a mild acne is not always readily drawn, but whatever diagnosis may be made in a given case, there are certain therapeutic measures, both general and local, which are equally adapted to the predisposing condition and to the well-developed acne.

To occupy the attention of this audience with any detailed description of the lesions or symptoms of acne would be both absurd and uncalled for, but a word or two as to clinical forms may not be amiss.

The terms acne papulosa, acne pustulosa and acne indurata, found in nearly every text-book, serve no useful purpose, and tend to mislead the student. There is no papular or pustular type of acne as there is of syphilis. The acne eruption is almost invariably a combination of papules and pustules, while in the early syphilides there is a notable predominance of either the papule or the pustule, even when both lesions happen to be present in a given case.

The classical acne indurata, on the other hand, does indicate a distinct type of the disease, although the name is a misnomer, and might give place to acne nodosa or acne phlegmonosa. The nodular lesions of this type are rarely if ever indurated or sclerosed, even when small, and as they increase in size and tend to suppurate their softness is a marked clinical feature.

The term acne rosacea is one which has long been a dermatological stumbling block. The common disease which affects the middle third of the face and is characterized by a new growth of connective tissue and blood vessels is certainly not a form of acne. It is clinically and pathologically distinct and deserves the distinct name which many now apply to it, viz., rosacea. But there is a form of acne which often affects the nose in the years of adolescence and even later, which is characterized by a notable degree of cutaneous congestion, and which bears a strong resemblance to rosacea. This might with justice be termed acne rosacea, but to avoid further confusion, I would suggest the abolition of this term and the substitution of acne erythematosa.

The diseases known as acne cachecticorum, acne varioliformis and keloidal acne are quite distinct from acne vulgaris, and it would avoid much confusion if our committee on nomenclature could effect a change in their names.

From a therapeutic standpoint, acne may be conveniently divided according to the plan upon which surgeons have classified leg ulcers, viz., into an irritable and an indolent type. In the former, the skin is often fine and delicate. An urticarial element, dependent upon a general neurotic state, is usually present and local treatment is rarely of much service. In the latter, or the indolent variety of acne, vigorous local measures are indicated and often produce a most brilliant result.

In the therapeutics of acne it is a common and serious mistake to regard the disease as a purely local one, but too often the general treatment of the patient is overlooked or made subsidiary to the application of the conventional ointment or lotion.

One might as well claim that a sad or a happy expression of the

face is due to a condition of the skin and muscles as to assert that a bad complexion or the eruption in acne is an affair pertaining solely to the sebaceous glands. A sluggish circulation and a constantly recurring irritation of the gastro-intestinal tract is frequently as essential a part of acne as the follicular congestion and the presence of microbes in the pustules. Even a functional disturbance of the liver may have as much to do with a case of acne as it has with a case of hæmorrhoids.

All active measures, either hygienic or medicinal, which will improve the functional activity of the various organs, and raise the tone of the patient's mind and body to its normal pitch, whether it be a short vacation or a dose of physic, will strike at the tap-root of acne, and if it does not suffice unaided to cure the disease, as sometimes happens, it will certainly tend to increase the beneficial effect of local applications.

Of the medical treatment of acne, little need be said. A dose of salts or castor oil may often benefit the patient, but no one would be apt to speak of these as remedies for acne. In like manner, calx sulphurata, ergot, glycerine, arsenic, and other drugs may, under certain conditions, prove of some service to a patient with acne, but the direct effect which they produce upon an acne eruption has been greatly overrated, and their routine use by many physicians on the strength of text-book commendation is greatly to be regretted.

In the local treatment of acne, judging from the text-books, little advancement has been made in recent years. The lotions and ointments of a generation or two ago are still awarded an honorable mention, if not recommended *magna cum laude*, and a few new formulæ of the same character are usually added.

And what are these local applications worth in the cure of acne? They may oil and soften a harsh, dry skin; they may soothe in a slight degree a highly inflamed skin, and they may cover and conceal the irregularities and blotches of an ugly skin; but as therapeutic agents in the cure of acne, the lotions and creams and balms of a lenitive or slightly stimulating character are fakes in their conception and failures in their action. They accomplish no result which can not be more speedily attained in other ways, and in the face of dermatological tradition, I have no hesitancy in declaring them all to be practically of no value.

The best that can be said of these mild applications is that they do no harm. The inunction of oil in which the Romans indulged after a bath did no harm to a sound and healthy skin, but I would like to

have some one, either Roman or American, tell me what earthly good it did.

When we consider the local applications which are highly stimulating to the cutaneous circulation, and especially those which produce a marked desquamation of the epidermis, a different judgment of their merits must be offered. The use of soap in acne when applied simply as an epidermicide, and not combined with friction, has long been in use, although its value has never perhaps been fully appreciated. The intense swelling of the skin produced by soap is apt to occasion considerable pain, and except in cases where many deep-seated lesions are present, epidermicide applications having a more superficial action may be substituted. Among these are bichloride of mercury, salicyclic acid, and resorcin. The latter, in an aqueous solution of a strength varying from 20 to 40 per cent., has been used with excellent results in many cases at the Vanderbilt clinic, where little trouble on the part of the physician and a speedy result were desirable.

In the local treatment of acne, the best results are to be attained, in my opinion, by measures which may be termed dynamic rather than chemical. These include massage, friction, and the use of instruments intended to empty the distended and obstructed follicles.

It is now many years since I abandoned in my private practice the routine use of ointments and lotions in the treatment of acne, and the substitution of a mechanical plan of treatment, although it has involved more time and trouble than the writing of prescriptions, has been far more satisfactory to me, and I am sure has proved of much greater benefit to my patients.

I hesitate to use the term "facial massage" in discussing the treatment of acne, because this term has been brought into more or less disrepute by various advertising "complexion specialists" who lay great stress upon dipping the tips of the fingers in cold cream or some alleged "skin-food" and gently manipulating the face according to some peculiar, arbitrary and unnecessary rule. By massage of the face I mean vigorous and frequent pinching of the skin between the thumb and fingers of one or both hands. It matters not in what direction the force is applied. No injury can be done to the skin so long as the patient is conscious and able to protest against a too violent use of the fingers. A knowledge of the direction of the underlying muscles, which is claimed to be of the utmost importance by the quasi-scientific "complexion specialist" is no more requisite than is a knowledge of the cellular texture of wood on the part of the cook who

scours a kitchen table. Such massage or pinching of the skin for a minute or two will often give to a dry, harsh cheek a soft, smooth and oily feeling. In a case of acne it quickens the cutaneous circulation and hastens the absorption of nodules; it destroys all pustular lesions, whether superficial or deep seated; it tends to empty distended glands, obstructed ducts, and gives life and tone to a skin whose inactivity is the prime cause of the disease in question.

It is advisable for the physician to perform this kind of massage once or twice at the outset and then to have the patient repeat it every day as vigorously as possible. Instead of using cold cream or any other emollient for the purpose of softening the skin, it is much better to dust the face with powdered pumice stone, so that the fingers will not slip and thus defeat the object of the manipulation.

Of the various instruments used in the treatment of acne, a few are of only theoretical value, while one or two seem to me to be indispensable. In late years there has been, I think, a tendency to the more frequent use of instrumental measures in restoring the skin to its normal condition, and less resort to the old-time lotions, a change which is certainly to be commended.

The electrolytic needle has been recommended in the treatment of acne, but there appears to be no occasion for its use, as it accomplishes no result which cannot be more readily attained by other means.

The acne lancet, or triangular knife, with a shoulder to regulate the depth of the incision, is of great service in cases where dermic abscesses or deep-seated nodules are present. But its use in evacuating small superficial pustules is quite unnecessary and it frequently brings upon the physician the unjust opprobrium of causing scars which result naturally from the destruction of tissue by the acne pustules.

The various instruments devised for the expression of comedos and the emptying of distended follicles serve a useful purpose and may be advantageously employed in most cases. Some of those in use appear to me to be clumsy and ill adapted to the purpose for which they are intended, but experience in the use of any instrument will accomplish results which, unattained by others, might lead to an unfair condemnation of the instrument. At the present time the best comedo extractor appears to be largely a matter of taste. With the advent of stem-winding watches the old-time watch key gave place to a silver tube of varying size, which, I believe, I was the first to recommend. Experience has shown that the silver tube is far inferior to an instrument which presses only upon one side of the follicle, and for many years I have used a steel claw like that on the end of a tack hammer,

or a small curette with a semi-circular piece cut out of the end. This presses on opposite sides of a comedo and effects its extraction much more readily than an instrument with a rounded aperture.

The best instrument, however, for general use in the local treatment of acne is the curette. With this the superficial pustules can be destroyed far more readily than by means of a lancet, and the comedos either pressed out or their projecting heads scraped off so that daily massage will cause their speedy disappearance. The vigorous use of this instrument often presses out of the distended follicles a considerable amount of sebaceous matter. It quickens the cutaneous circulation and thereby promotes the absorption of the plastic deposit in indolent nodules. In most cases its frequent and persistent use tends to increase the functional activity of the glands, to stimulate the inactive skin, and to cause it to assume a comparatively normal appearance.

Almost any form of curette may be used for this purpose, from a sharp spoon to a dull spatula, but the instrument which I have used for many years with the greatest satisfaction is a circular curette about the shape and size of a finger ring. After scraping the forehead and cheeks with this, it is my custom to bathe the face with the same antiseptic solution which I use to cleanse the instrument (usually borolyptol). But I must confess that I do this merely from a conventional deference to the germ theory, being fully convinced, after years of experience, that the excellent result which follows this method of treatment is due solely to the mechanical action of the instrument, and that no better result can be obtained by any attempt to disinfect the follicles.

Many lengthy chapters and journal articles have been written on the therapeutics of acne. If I were asked to give the practical treatment of this disease in the fewest possible words, I would simply recommend a strict diet, cold baths, systematic exercise, and the frequent use of the curette.

SOCIETY TRANSACTIONS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Twenty-Sixth Annual Meeting, Held at the Hotel Bellevue, Boston, September 18, 19 and 20, 1902.

The President, George Thomas Jackson, M.D., of New York, in the chair.

Second Day, Friday, September 19th.

(*Continued from page 97.*)

The Dermatoses Occurring in Exophthalmic Goitre. By Drs. J. N. Hyde and E. L. McEwen, of Chicago. (Read by Dr. Hyde.)

Dr. Fordyce: At the last meeting of the Association I showed a photograph of a case of excessive pigmentation of the skin in Graves' disease. The parts of the body exposed to the light showed the pigmentation most intensely, while it was entirely absent in those areas where the abdominal folds came together.

Dr. Harding: I would like to mention a case of alopecia occurring in the course of Graves' disease. In this case the principal symptom was the exophthalmos, the other symptoms being lacking for a long time. The alopecia areata at first consisted of a few patches, which responded to treatment. There was a recurrence, however, the following year, and this proved more obstinate to treatment. A year ago there developed total alopecia of the scalp, followed by alopecia of the eyebrows and gradually extending over the body. This last attack has refused to respond to treatment.

Dr. Hyde: (Closing the discussion.) In some of the cases of alopecia occurring in the course of Graves' disease, the loss of hair has been limited; sometimes the pilary growth of the eyebrow alone is lost; sometimes that of the scalp.

The pigmentation in these cases is a very interesting feature. I would like to know whether it is more or less intimately associated with the general process, or has relation to the tachycardia and the excessive diaphoresis which occurs in some patients affected with exophthalmic goitre.

The afternoon session on Friday was held in one of the lecture-rooms of the Harvard Medical School building.

Structure and Mode of Formation of the Smallpox Pustule. Lantern-Slide Demonstration. By Dr. W. T. Councilman, of Boston.

A Further Report on Nævocarcinoma. By Dr. A. Ravogli, of Cincinnati.

The Value of Radio-Therapy in Cutaneous and Other Cancers. Illustrated with Lantern-Slides. By Dr. C. W. Allen, of New York.

(See page 75, Vol. XXI.)

Radio-Therapeutic Observations. By Dr. J. Zeisler, of Chicago.

Dr. Allen: Having used the static machine almost exclusively in many of my cases, and often with absolutely satisfactory results, I cannot quite admit the statement made by Dr. Zeisler that the static machine does not do the work. I have also used the coil, both in my office and in several patients' residences with equally gratifying success.

Dr. A. R. Robinson: In the line of Dr. Allen's paper I would like to report a case of xeroderma pigmentosum in a child five years of age. There were about fifteen cancerous lesions, two of them as large as a walnut on the face. One covered the whole of the upper eyelid. The child was put on thyroid extract, and in four months' time all but two of the lesions had disappeared and there was less pigmentation and angiomatous condition of the neck and forearms. Finally, but one large lesion remained, and three months ago I began to use the X-ray on that. The exposures were made very carefully, only once a week, but caused a marked dermatitis. I failed to see a particle of improvement in the cancer nodule. Perhaps the age of the patient makes some difference in these cases.

In regard to the cases of cancer of the breast reported by Dr. Allen I would mention that Johnson and Merrill recently reported seven cases, all of which failed to show any improvement, although my own cases were decidedly benefited. Some cases of mammary cancer show no improvement.

In regard to the treatment of sycosis by means of the X-ray, the trouble is that there is some danger of producing a permanent alopecia. I have in mind such a case, where after two treatments of the back of the head, the hairs all fell out, and the sycosis on the face did not improve. Six months later the treatment was successful.

Dr. Allen has already replied to Dr. Zeisler's view regarding the use of the static machine for X-ray work. Dr. Williams and others say that one is just as good as the other. It was recommended to me by Dr. Piffard, and I have used it exclusively with satisfaction.

In regard to the treatment of epithelioma, I fail to see why you should take three or four months time in treating a case with the X-ray and perhaps produce an alopecia of the face, when you can usually cure the case at a single sitting by the older methods, especially by caustics. In certain cases where the epithelioma is near the eye or in the region of the blood-vessels in the neck, the use of the X-ray is advisable, but I have read the report of every case of cutaneous cancer that has been published as cured, both in Europe and in this country, and I must say that at least 75 or 80 per cent. could be cured much quicker by caustics. I recall one case of very superficial epithelioma of the lip, which had been treated every day for two months by the X-ray without any effect by a skilled operator, and which I cured in two minutes by an application of caustic potash. I do not think the X-ray reliable in a cutaneous

epithelioma arising from the prickle layer of the rete. In rodent ulcer they are evidently efficient.

Dr. William T. Corlett: I agree *in toto* with what Dr. Zeisler has said, and his experience is in perfect accord with my own. Two years ago I found out that my attempts at X-ray work frequently resulted in failure because I did not get the right sort of tube. I then used the ordinary hard tube, and with it my work resulted in failure almost in every instance. One of the cases was a woman with lupus erythematosus, which was treated about two years ago with the X-rays, but without benefit. Since then I have treated the same patient, using a soft tube, and have practically cured her. I would also like to mention a case of sycosis that resisted all forms of treatment for two years and is now nearly cured by means of the X-ray. A case of epithelioma, so pronounced by the pathologists of Lakeside Hospital, was cured by six applications, the shortest course of treatment I have seen. A case of rodent ulcer in which a fatal result was imminent has been under the X-ray treatment for several months and is now slowly improving.

I think patients residing out of town, and who have not made preparations to stay for a protracted course of treatment, should be given a test exposure at the time of their first visit: in this way the possible idiosyncrasy to the action of the rays that has been referred to may be discovered. I usually give an initial exposure of ten minutes and instruct the patient to return in a fortnight. I have never had a severe burn in my own experience, but have seen a very severe and obstinate X-ray burn in examining a fractured bone.

Dr. William A. Pusey, Chicago: I wish to call attention to one small historical inaccuracy in Dr. Zeisler's article, and that is his reference to the theory that the effects of X-rays are due to the actinic properties of the rays, as Kienboeck's theory. That theory was announced and experimentally proved by Professor Elihu Thompson, long before Kienboeck ever suggested it. Kienboeck is only one of many adherents of that theory and is in no way entitled to such prominence in connection with it as would be suggested by calling it Kienboeck's theory.

As to Dr. Zeisler's technique I have not the slightest doubt that with it he gets results that are excellent, but I think that he is suggesting a method against which a warning must be offered. He is following Kienboeck's technique, based upon the postulate laid down by Kienboeck, that there is no such thing as idiosyncrasy to X-rays, and Kienboeck is practically the only writer who takes such a position. Any man who has done much work with X-rays cannot but be struck by the marked difference in susceptibility of individuals, a difference that at times amounts to idiosyncrasy. There is not the slightest doubt that hairs may be removed from the chin or scalp or anywhere else, by a single exposure, but I am sure that the man who undertakes to do this is running the risk of disaster. I have seen a number of X-ray burns

of severe type produced by what are considered by some workers safe exposures for therapeutic purposes.

As to the kind of tubes to be used, to which attention has been called, that is largely a matter of choice for different diseases. The whole point is to obtain a sufficient reaction for the purposes of the case in hand, without getting a dangerous reaction. Such a reaction can be produced with a hard tube or a soft one, and a severe burn may be produced with either. Kienboeck's suggestion that a soft tube is not dangerous, because the rays from it do not penetrate deeply, is of no importance in this connection, for the rays from such a tube do penetrate to the depth of half an inch or more, and a necrosis of even one-fourth inch might well be dreaded in some cases. As to the kind of apparatus there is no question that X-rays can be gotten from a coil or a static machine, or a Tesla apparatus, in fact from any apparatus that will give you a current of high enough potential, but there is ground for choice as to convenience and other factors, between forms of apparatus, and like Dr. Zeisler, I much prefer the use of induction coil.

Dr. Stelwagon: It seems to me it is in cases of rodent ulcer about the eye, to which Dr. Robinson referred, that the use of the X-ray is particularly valuable. In other and more accessible regions I am inclined to favor the method of using a caustic application, and then supplementing this by the X-ray as the part begins to heal.

As regards the choice of apparatus, I have used the static battery in my office and I know others have used it with very satisfactory results. The only disadvantage connected with it is that it cannot always be relied upon, as it does not work satisfactorily in certain kinds of weather. In connection with my hospital and dispensary service the coil has been employed.

Dr. J. C. White: I wish to put on record a case of carcinoma of the skin developing at the site of a prolonged X-ray dermatitis.

Although the X-ray may produce a loss of hair, it is capable as well of setting up a hypertrichosis. I have in mind a woman who was exposed to the action of the rays for some lesion on the temple, which was cured, but subsequently the hairs in that region were completely lost. Later on, the hairs grew again in the denuded area and this was accompanied by a hypertrichosis involving the upper third of the corresponding cheek.

I hope some of my Boston colleagues who are present here and who have had sufficient experience with this method of treatment will say something about the action of the rays in various types of skin diseases.

Dr. S. Sherwell: I was very glad to hear the remarks made by Dr. Robinson and the conclusions of Dr. Allen: I regarded the latter as more of an enthusiast in regard to this method of treatment than seems to be the case. While we are all willing to utilize the rays to the fullest extent that is warranted, still I am inclined to agree with Dr.

Robinson that the older methods of treatment are preferable in many instances. I have used the acid nitrate of mercury in hundreds of cases of epithelioma with entire satisfaction, both to the patient and myself. Only a few days ago I operated on an elderly lady by this method, first curetting the lesion and then applying the acid nitrate of mercury. In these cases I expect the cure to be permanent, and it usually is. The treatment is somewhat painful, but not very, and can usually be relieved by ordinary means. I use cocaine sometimes before curetting, though more frequently afterward, before applying the acid—and find the pain but seldom complained of.

I appreciate the value of the X-ray, and have seen some inoperable cases of cancer of the orbit wonderfully helped by it. I do not, however, think that it should entirely supplant the more radical methods in certain cases.

Dr. Ravogli: I think the name X-ray is very appropriate, because I find it very difficult to explain the action of the rays on the tissues. I recall the case of a man who entered the City Hospital with an extensive epithelioma involving the calf of the leg. An examination was made by the pathologist of the hospital, who reported the case as one of cancer. My colleague, who was then on duty, applied the Vienna plate, producing an extensive burn, followed by apparent improvement, but when I returned to the service I found that the growth had recurred. I advised amputation, but before consenting to this, the patient asked to have the X-ray tried. After about twenty exposures I was obliged to stop the treatment on account of a dermatitis which had become exceedingly annoying. At this time, the appearance of the malignant growth had entirely changed. Healthy granulations were forming and there were evidences of cicatrization. We have every hope now of ultimate recovery. In addition to the skin lesion in this case, the subcrural ganglion was extremely swollen, and after the application of the X-ray, the glands became reduced in size. Since carrying out this treatment I have examined sections of the tissues microscopically, and can no longer find any evidences of cancer.

Dr. F. H. Montgomery: There is no question that superficial forms of carcinoma disappear under radio-therapy and that the resulting scars are less conspicuous than those obtained by other methods. For the diffuse and generalized forms there is no other treatment equal to it. For the localized, superficial lesions there is no reason why the knife or caustic should not be employed, though there is an element of safety in supplementing this treatment with the X-rays.

In the treatment of deeper-seated carcinoma by this method, it is reasonable to suppose that by producing an inflammation in these tumors we may encourage dissemination of the cancer cells into the surrounding tissues. This is a danger that should be considered, and we have seen illustrations of it. In several cases under the observation of Dr.

Hyde, Dr. Ormsby and myself, where quite a reaction was produced by the rays, the treatment was followed (after subsidence of the reaction) by a rapid development of the growth—much more rapid than is observed in unmolested carcinoma. In at least two cases we have seen metastases occur during the gradual disappearance of the original growth under treatment.

In tuberculosis there is no question that the X-ray treatment is very satisfactory. In lupus erythematosus it is less so, but in the modified Finsen light we have a safe and successful method of treating this affection. In five or six of the cases Dr. Hyde and I have submitted to this treatment, the lesions have entirely disappeared. Two of them were first subjected to radio-therapy without marked improvement.

Dr. D. W. Montgomery: I have never treated hypertrichosis with the X-rays because of the possible legal complications this method of treatment might give rise to. If such a case ever came before a jury, the consequences would probably be disastrous for the physician.

In regard to the statement made by Dr. Robinson favoring the use of the curette or caustic in epithelioma, I would like to say that I have never seen such beautiful scars by any method of treating superficial epithelioma as I get with the X-rays. It is almost imperceptible, and I think this is a very desirable factor in lesions on the face.

Dr. Allen: I agree with the statement of Dr. Montgomery regarding the slight degree of scarring that remains after the treatment of epithelioma with the X-rays: in fact, the rays will remove scar tissue itself as I have witnessed in several instances.

Dr. Zeiser: This subject will not be settled here to-day, and I have very little to say in closing. I beg to apologize to the Eastern gentleman for having made the remark I did about the static machines. I was in hopes that Dr. Pusey might say something about the superiority of the coils over the static machine.

Dr. Pusey: I think that static machines are much inferior to coils.

Dr. Zeisler: In reply to Dr. Robinson as regards the danger of producing a permanent alopecia by treating sycosis with the X-rays, I can only quote from my paper that in the cases treated by me in that manner, the hairs returned within two months. In hypertrichosis the hairs also return. In fact, it is very difficult to make epilation permanent.

In reply to the criticisms made by Dr. Pusey I would say that I did not care to go carefully into the literature of the subject. I referred to Freund and to Kienboeck as representing the two factions in regard to the selection of either hard or soft tubes, and in following the latter authority I was backed up by a man whose results I had seen, who never had any injurious effects from his method of treatment, and whose name has become a household word among German radio-therapeutists.

I have often given exposures of twenty minutes each, and have never seen any damage result therefrom. If I should undertake to remove hair from a lady's face by 70 or 80 or 90 exposures, the treatment would prove too laborious for me, and, I am afraid, too expensive for the patient. If, however, I can tell her that I can remove the hair in three or four treatments, it places the method within her reach.

As regards the statement made by Dr. Robinson favoring the knife or caustic in treating epithelioma, I would say that the majority of patients will always select a treatment which means no cutting or burning. I would rather go to Dr. Pusey for six months and be treated with the X-rays than have myself curetted or cut or burned.

NEW YORK DERMATOLOGICAL SOCIETY.

308th Regular Meeting, November 25, 1902.

Oscar H. Holder, M.D., President.

A Case of Prurigo. Presented by Dr. G. H. Fox.

The patient was a child aged ten years, and was one of the most marked cases of prurigo that Dr. Fox had ever seen in this country. The disease had existed since the age of two years and a half. Attention was called to the occurrence of the eruption on the soles of the feet.

Dr. E. B. Bronson thought the case was typical in most respects, though some of the features were peculiar as illustrating the neuropathic character of the disease in contradistinction to any essential primary trophic changes in the skin. It was a secondary matter to look for any special lesion in the skin, as the disease was, in his opinion, a neurosis associated with trophic changes, mainly the result of scratching. It somewhat resembled dermatitis herpetiformis.

Dr. S. Sherwell said it was the most typical case he had ever seen presented before the Society. One similar case had occurred in his practice of the Hebra type, a girl aged 17. He presented her before the Society many years ago.

Dr. L. Duncan Bulkley said that it corresponded exactly with cases seen in Vienna. It was the most typical case he had seen in this country.

Dr. C. W. Allen said he regarded the case as one of prurigo. When he had the service at the Good Samaritan Dispensary he had seen several children afflicted with prurigo, and at least one of these was born in this country. One girl had been cured.

Dr. S. Lustgarten said this was the most typical case he had met with in America.

Dr. Fox said that the mother stated that it was much worse in summer. He was interested in what Dr. Bronson had said about its resemblance to dermatitis herpetiformis. It certainly presented a strong

similarity to that disease in its papular form. The father and mother of the child were in perfect health, and four grandparents were living. There was no tuberculosis in the family, which was of interest because Hebra stated that in a large number of these cases the parents die of tuberculosis. He had seen a few cases which had apparently been cured for a short time, but the disease was apt to return in two or three months. The eruption on the penis suggested scabies at first glance. The eruption on the sole of the foot seemed to be secondary rather than a part of the prurigo itself.

A Case of Epithelioma of the Face Treated by the X-Ray. Presented by Dr. C. W. Allen.

The patient was a woman aged about forty-five years, who had had the lesion on the face for fifteen years. The portion on the bridge of the nose had been at first called a "spider cancer." After some treatment it had been operated upon by wide excision, the scar of which was still apparent. There had been recurrence, and other operations had been done, and had been followed by further recurrences. The condition had persisted now for fifteen years. On coming to him there was an open ulcer occupying the region of the root of the nose, brow and forehead, and there was outlying evidence of epitheliomatous tissue extending from the canthus on either side up over the forehead and down over half of the nose. Under a few X-ray exposures the lesion had almost entirely disappeared, and it was so near a perfect cure that he did not hesitate to present it.

Dr. Fox said that treatment with the curette would cure a case of this kind so quickly and so easily that he could not see the use of resorting to the troublesome and prolonged X-ray treatment.

Dr. Allen replied that he could not think of curetting such a case because of the very extensive curetting that would be demanded and because of the region involved.

Dr. A. R. Robinson said that ordinarily in this class of cases one could accomplish more in twenty-four hours with the curette than in six months with the X-ray. There were certain cases that were specially well suited to X-ray work, but these cases were few. The present case was far from well. The very superficial epitheliomata near the eye usually act well with the X-ray.

Dr. Sherwell said that he used the curette a good deal, but judging from the present condition of this case he would hesitate to resort to the curette, the infiltration of tissue around was so great. He had curetted around the inner canthus a number of times, apparently with both good and permanent results, but the extent of the infiltration in this case would make him hesitate to do it. The case presented marked infiltration, as he had said, and was far from being cured. X-ray treat-

ment should be continued, for he had seen one or two very brilliant results in similar cases involving the orbit, even more deeply than this.

Dr. J. A. Fordyce did not think that curettage alone, without the subsequent applications of caustics, would be indicated here, because it would be apt to increase the activity of the growth. The case was peculiarly well adapted to X-ray treatment because caustics could not be used. The scar was better than could be obtained by caustic and curetting. The prolongation of the treatment for a few months was nothing compared with this superior cosmetic result.

Dr. S. Lustgarten thought the case was eminently well adapted for conservative treatment,—surgical treatment was not applicable except in connection with more or less extensive plastic operations. Caustics could not be used, and curetting seemed to him very unsatisfactory because of the tendency to relapse. As this case had not been completely cured as yet, nothing more definite could be said regarding it.

Dr. Bulkley agreed that the cases involving the eye and the vicinity of the nose were eminently suited for X-ray treatment. He disliked very much to attempt to eradicate an epithelioma at the side of the nose and near the canthus by curetting. He thought the result from the X-ray treatment was very satisfactory, and the scar obtained in this case better than could be obtained by curetting. Again, from curetting one continually obtained a new growth on the side. He had not seen cases which had been curetted once or twice and remained well thereafter, for his cases did not do this in spite of the most thorough curetting down to the grating of the tissue. The remaining nodule in the case under discussion he would suggest should be treated by curetting, and then be subjected to the X-ray.

Dr. Allen said that he had called attention, in presenting the case, to the fact that an epitheliomatous nodule persisted, which could be scraped or burned out, and that this would probably be quicker than the X-ray treatment. So much treatment of that kind had, however, been employed in the past fifteen years that the lady was not desirous of having more of it, and she was herself very much gratified with the few weeks of X-ray treatment. He was prepared to give the best possible prognosis in this case.

A Case of Multiple Sarcomatosis. Presented by Dr. S. Lustgarten.

The patient was a man who had been presented to the Society two years ago. He had been treated at first by injections of sodium cacodylate, receiving 23 injections, the maximum dose being 1½ grains and the minimum 1-6 of a grain. Not being favorably impressed with the effect of this, arsenite of sodium was substituted, and he received 153 injections of two per cent. solution, the maximum dose being 21, and the minimum dose 9 minims. The patient had received altogether about 60 grains of

arsenite of sodium. The effect had been very slow in development, but, nevertheless, had been very marked. It was remarkable that there had been no exhibition of the toxic effect of the arsenic. The blood count was normal, and there was no evidence of involvement of the internal organs. He intended to keep up the treatment. The pathologist, Dr. F. S. Mandlebaum, reported that the first specimen of skin, examined in 1900, showed only slight sarcoma with much hemosiderine pigment, which responded to the iron reactions. The second specimen, examined last May, showed much more involvement, the growth being of a kind peculiar to the skin, with much connective tissue and mostly small cells —the so-called "sarcoid tumor."

ABSTRACTS.

Report of Four Cases of Syphilis Mistaken for Smallpox, J. F. Schamberg, M.D., *Jour. Amer. Med. Assn.*, Nov. 29, 1902, p. 1385.

Schamberg gives the details of four cases of acute syphilis sent by physicians to the Municipal Hospital, Philadelphia, with the diagnosis of smallpox, and which came under his notice at that institution. In the discussion following this report, Gottheil referred to the fact that during an epidemic in New York some years ago, a number of smallpox patients were sent to the venereal wards of the Charity Hospital incorrectly diagnosed as pustular syphilis cases. Corlett, Allen, and Stelwagon cited instances of temporary difficulty in such differentiation. The occasional presence of fever and general aching and pain in a varioliform syphiloderm, and the relative absence of such symptoms in some cases of smallpox are the chief sources of the confusion. As Schamberg states, the onset of the two diseases is, as a rule, quite different; the syphilitic patient giving a history of having felt weak and debilitated for some time; and if fever precedes the eruption it is not very high, and is not accompanied by severe prostration. The illness of smallpox develops suddenly. The efflorescences are generally preceded (two or three days before) by a distinct chill or rigors, followed by elevation of temperature, and accompanied by severe headache, backache, nausea, vomiting or vertigo, general pains and severe prostration. The appearance of the eruption in smallpox is sudden and of uniform character, in forty-eight hours the full complement of lesions being present; in syphilis the lesions appear in crops for a number of days or longer. While the distribution of the syphilodermata may be identical with that seen in smallpox, as a rule variations are observed. The syphilodermata may involve the trunk more copiously than the face, a condition rarely seen in smallpox. The dorsal surfaces of the wrists and hands are usually predominantly involved in smallpox, less so or not at all in the varioliform syphilides. The palms and soles rarely escape in smallpox except in instances of extremely mild character; in the pustular syphilodermata these parts are rarely the seat of such lesions. In syphilis the lesions are commonly in various stages; in smallpox there is in this respect uniformity, although, as a rule the lesions on the face show a slight advance over the eruption on other parts. Moreover, in the syphilodermata there is quite commonly a tendency to segmental grouping on the forehead at the border of the hair, at the commissures of the mouth, etc. There is a more solid base to the syphilitic lesion; it is conical in shape; the pustulation involving the upper central part, whereas in smallpox the lesions are completely involved in the pustular process, and are full and globular. The lesions of syphilis may remain small or grow to large size, with sometimes considerable subjacent ulceration. The course of the variolous pustule is rapid; that of the syphilodermata slow. The adenopathy of syphilis, which is

sometimes cited as a point of difference, can not, according to Schamberg's observations, be considered of great importance, as he has found the superficial glands, as a rule, considerably enlarged in smallpox. In the discussion most weight was placed upon the uniformity of the eruption and the constitutional symptoms in smallpox; and upon the croplike appearance and the more solid character of the base in the pustules of the syphilodermata together with the history and other evidences of syphilis.—Stelwagon.

Vaccinal Eruptions.

Stelwagon, in his Chairman's address before the Section of Cutaneous Medicine of the American Medical Association (*Jour. Amer. Med. Ass.*, Nov. 22, 1902, page 1291), discusses the cutaneous eruptions which occasionally follow upon the performance of vaccination. The most important eruptions considered from a dermatological view point are erythema multiforme, urticaria, impetigo contagiosa and pemphigoid eruptions. The thought is expressed that perhaps some of the cases formerly reported as generalized vaccinia were in reality instances of impetigo contagiosa. The most generalized rash observed by the writer is a mixed type of urticaria and erythema multiforme, or possibly better described as an erythema multiforme with itching and other features of urticaria. The urticaria observed presents no departure from the ordinary type, save a most marked tendency to vesicular capping and vesico-bullous and bullous development, and a greater persistence.

A generalized pemphigoid eruption, combining in general the features of acute pemphigus and dermatitis herpetiformis, though relatively rare, has been noted by a number of observers. The writer reports three examples of this affection encountered during the past year; two in adults and one in a child, the eruption appearing from two to four weeks after vaccination. Two presented the features of acute pemphigus and one resembled a persistent bullous erythema multiforme or dermatitis herpetiformis. When last seen the eruption had persisted with recurrences, for three, four, and eight months respectively. The writer believes that these bullous eruptions while not numerous after vaccination are sufficiently frequent to justify the assumption of an etiologic relationship.

The researches of Pernet and Bullock into the cause of acute pemphigus are mentioned; these investigators reported and analyzed a number of instances of acute fatal pemphigus apparently resulting, in at least some cases, from wound infection. One case is reported in which a pemphigoid eruption apparently followed inoculation from a similar eruption upon the teats of a cow.

Eczema occasionally follows vaccination, but probably only in those with a clear eczematous tendency. The writer has noticed amelioration in eczema follow vaccination in several instances, notably in a chronic case in which a cure took place.

Psoriasis, lupus vulgaris, syphilis, and tuberculosis are also considered in their relationship to vaccination; the view is entertained that the first named affection is never caused by vaccination, although an outbreak may be excited in a predisposed subject. Lupus, syphilis and leprosy may be transferred by vaccination in rare cases, although the latter two diseases cannot be conveyed when bovine lymph is employed. In many instances of eruption occurring during or immediately subsequent to vaccination it is more than probable that they are purely coincidental, and in no way connected with or due to this procedure.—Schamberg.

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ERYTHRODERMIE PITYRIASIQUE EN PLAQUES DISSEMINEES.

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THE rarity of this disease and the fact that two similar cases have been reported from the Department of Skin Diseases at the Massachusetts General Hospital leads me to place on record our third case within three years.

The patient, I. S., 44 years of age, was born in Russia, near Poland, and until his departure for the United States was a peddler of milk and had experienced but one illness, the grippe. He is married, and his wife and six children are living and free from any skin diseases. In 1888 he came to this country, and has kept a variety store in Boston ever since. This occupation requires him to stand for many hours each day.

In 1898 the patient came to the skin clinic and the following entry was made in our books: "Extraordinary macular, deep red lesions of eight years' duration. Symmetrical glandular infiltration. Beginning mycosis fungoides?"

In April, 1901, the patient felt that the boot on his right foot was too tight. His foot became œdematous and the second toe turned blue, cold and very painful, and dry gangrene developed, on account of which the toe was amputated on July 17 in the surgical out-patient department by Dr. C. A. Porter. A thorough physical examination was made at this time, in which no sugar or albumen were found in the urine, and his viscera were declared normal. On account of this negative examination and the persistence of the dorsalis pedis pulse the diagnosis of "*hebräische Krankheit*" was made.

The unusual diagnosis and possible ætiological importance of this

intercurrent malady should detain us for a few moments. In the British *Journal of Dermatology* (February, 1901, p. 41) F. Parkes Weber reports a strikingly similar case in a man who noticed swelling, cyanosis and pain in his left foot. These conditions were all increased in severity whenever the patient stood for a long time and especially after exposure to heat or to cold. Gangrene developed later in several points and amputation of the foot was performed. The pathological examination showed that the arteries were patent and showed no end-arteritis or thrombosis, but the microscope revealed great thickening of the arterioles and a similar condition of the middle coat of the arteries in the vicinity of the gangrenous spots. The nerves were found to be quite normal, but the muscles and bones of the foot were atrophied. On the strength of these findings Weber made the diagnosis of obliterating arteritis of the arterioles—the so-called "*hebräische Krankheit.*"

In July, 1901, our patient appeared at the nerve department of the hospital and was treated successfully for pain in the right foot and toes, and four weeks later he again presented himself, complaining of pain behind the knee of the left leg. Examination proved that the pain increased whenever the man stood or was exposed to the cold, but remained unaltered in warm atmospheres.

On November 12, 1902, the patient came to the skin department again on account of a severe lymphangitis which did not yield to ambulatory treatment, and at the end of a few days he was sent to the wards of the hospital. The house records state that at entrance the man's temperature was 99 $^{3}/_{5}$ degrees F., pulse 80, and respiration 20. General physical examination again revealed nothing abnormal of importance outside of the local disturbance in the leg. The right leg was not tender to pressure, but the toes were cold and blue. The left leg, on its anterior, internal face, showed a cord-like mass, red-blue in color, easily palpable and painful to pressure. Tenderness was most noticeable, however, in the calf, popliteal space and just below Scarpa's triangle. No œdema of the foot was present. An X-ray examination showed nothing abnormal and after two weeks the man was discharged improved.

On November 29 the man returned to us for a thorough cutaneous investigation. He stated that the spots appeared on his body twelve years ago, during the winter months, and he became aware of their presence merely from sight, as they did not itch or burn or cause any pain. He is well nourished and feels well. On his scalp there is a mild degree of seborrhœa, but the skin is not congested. Over the

very numerous pinkish-red, irregularly circular macules about one-lower and upper arms, especially on the extensor surface, appear half inch in diameter, which disappear on pressure. The hands show nothing.

Above the nipples there are no lesions, but below them appear small, sparsely scattered macules similar to those on the arms. Lower down the spots grow larger, reaching the diameter of one inch, but losing their distinctly round appearance. They are velvety to the touch and soft, and do not rise above the surface, are slightly scaly and disappear when compressed.

On the back, the lesions begin at the lower edge of the scapulæ, and are large, irregular in shape and sparsely scattered, do not appear over the spine, and are most abundant on the flanks. The lesions on the thighs, anteriorly and posteriorly, are so numerous that they practically coalesce, especially on the buttocks, where they appear blue-red in color and slightly furfuraceous. The penis and scrotum are unaffected. The lower legs are almost free. In the cervical region no glands are to be felt, but the right epitrochlear gland forms an oval body about one-half inch in length, while the left feels like a good-sized pea. There are small glands in the axillæ, but none appreciable in the inguinal region.

When the patient rests in bed for any length of time the macules disappear entirely from the arms, but no connection between the seasons of the year and the disappearance of the lesions can be discovered. The scaling everywhere is fine, dry and very slight. Pruritus and any evidence of papulation are positively absent.

The blood examination (made by our assistant, Dr. F. S. Burns) reveals the following percentages:

Polynuclear neutrophiles	62.8	per cent.
Small lymphocytes	20.0	"
Large lymphocytes	7.6	"
Eosinophiles	5.6	"
Transition forms	4.0	"
Hæmoglobin	85.0	"

For microscopical examination a small macule was excised from the thigh, hardened in alcohol and stained by various methods.

Epidermis. The stratum corneum consists of seven to eight layers of elongated, non-nucleated cells, forming an open network.

The stratum lucidum is absent.

The stratum granulosum is reduced to one layer of attenuated

spindle-shaped cells, with long, oval nuclei. In places even this thin layer is absent and small, very fine granules seeming to replace the normal layer.

The stratum spinosum appears much compressed. The cells are flattened and elongated and reduced to three or four layers in thickness. The whole stratum seems very œdematous, the protoplasm and nuclei appearing cloudy and receiving the stain but poorly. The palisade layer is almost universally absent and in certain areas the nuclei seem to have fallen out, leaving but a protoplasmic network. In other places at the same level the nuclei remain, but the tissue receives only the acid stains. In the upper layers of the rete, near the granular layer, the tissue is cloudy, bearing non-nucleated or vacuolated cells.

As we leave, on either side, this focus of highly degenerated epidermis, the conditions gradually become more normal, the layers increase in thickness, the tissue stains more clearly, the spines of the rete cells reappear and mitoses are observed.

Corium. Just below the highly abnormal epidermic area the papillæ are practically obliterated and, with the exception of an occasional connective tissue nucleus, no structures appear. Here the collagen itself seems abnormal. The bundles consist of œdematous, poorly staining, slightly waving fibers with elongated nuclei. The bundles abandon their more usual direction and run vertically and obliquely as well as horizontally and between them large empty lymph spaces appear.

In the more normal parts of the sections, papillæ reappear but are short and comparatively far apart and bear somewhat dilated capillaries, with no undue amount of cellular extravasation. Subpapillary vessels appear with no apparent endo or perivascular changes. The farther we leave the distinctly affected region, however, the vessels become more and more numerous and exhibit more and more cellular extravasation.

In the deeper layers of the corium the collagenous bundles become larger and somewhat tortuous, but they also are swollen, œdematous, mostly a-nuclear, and are surrounded by dilated lymph spaces. In addition, an occasional elongated, greatly dilated lymph vessel, with unusually vesicular nuclei, presents itself.

Deep down in the corium sweat glands and hair follicles appear, but their cells also show the effects of this universal œdema and appear vacuolated or have crescentic nuclei.

Elastin is everywhere reduced in amount, especially in the papil-

PLATE XVIII.—To Illustrate Dr. C. J. White's Article.

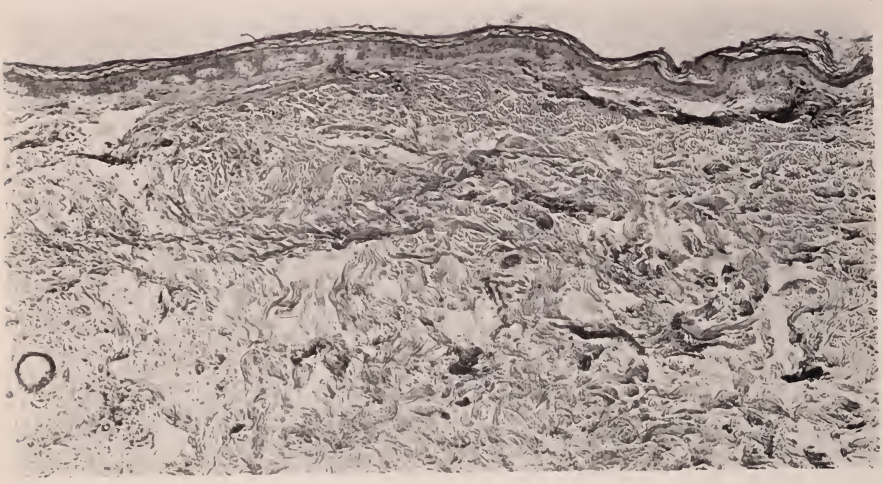


Fig. 1.



Fig. 2.

lary and subpapillary layers, but it retains its normal staining reactions to a marked extent, considering the highly œdematous condition of the skin.

The literature upon this rare disease is very meager, and so far as I have been able to discover is limited to the references which may be found at the end of this article. There seem to be but two affections at all akin to *érythrodermie pityriasique*. The first is parakeratosis variegata, first described by Unna;[2] but even this disease offers to my mind one insuperable barrier to the identity or even very close relationship of the two processes, namely, the presence of papules which were never present in the three cases of *érythrodermie pityriasique* of which I am cognizant (Brocq's, J. C. White's and the present one).

The microscope also reveals a condition which separates the two affections, that is the nucleated horny cells are present in practically all the sections of parakeratosis variegata and are never observed in the examples of *érythrodermie pityriasique* thus far examined.

The second disease which presents somewhat similar features is mycosis fungoides in its initial stages, the so-called pre-mycosic dermatitis. Here again one feature practically always present in one disease is universally absent in the other; I mean pruritus, which forms so distressing and persistent a factor in mycosis fungoides, and which is so totally wanting in *érythrodermie pityriasique*.

The discussion and differential diagnosis of these three affections have been so recently and so thoroughly described in this journal by J. C. White and by Colcott Fox and J. M. H. Macleod[3] that it seems hardly necessary to speak further here. It only remains for me to emphasize the great clinical similarity of the two previously reported cases of Brocq[4] and of J. C. White[1] to the case now presented by me and to summarize the histological findings of J. C. White's case (unfortunately no biopsic was possible in Brocq's case), which are so nearly identical with the microscopical conditions of the present case detailed above.

1. Open network formation of the stratum corneum composed of non-nucleated horny cells.

2. Absence of the stratum lucidum.

3. Great atrophy or even total absence of the stratum granulosum.

4. In places, compression of the rete cells and reduction of the layers composing the stratum spinosum; absence of the palisade layer; and finally, greatest divergence from the normal directly over the parts of the corium mostly affected.

5. Œdematous condition of the corium, and

6. Reduction in the amount of elastin.

In truth, the two specimens are almost identical, the one and only dissimilarity being the absence of vessels and their accompanying perivascular infiltration in my case, but here again the identity of the two cases returns the moment we leave the most seriously affected areas.

In closing I wish to make a suggestion with regard to the possible origin of this unusual dermatosis. Is not the intercurrence of this strange arteritis of the arterioles of the toe a significant fact in relation to the general cutaneous disease? In other words, have not we here a possible or even probable clue to the genesis of the whole process? It seems to me fair to assume that there may be everywhere (where the macules appear) a localized ischæmia produced by the deeper arterial twigs which don't appear in our sections, but which produce a localized starving of the skin, manifesting itself as œdema and consequent atrophy of the integument. This does not lead to actual necrosis and gangrene, as it did in the patient's toe (which is farthest from the heart and suffers most from faulty nutrition), for artificial anastomosis may come to the rescue and keep alive the areas normally dependent upon the diseased vessels.

I wish to express here my indebtedness to Mr. L. S. Brown, of the Massachusetts General Hospital, for the photographs which emphasize so well the various histo-pathological facts which I have endeavored to describe in the text.

BIBLIOGRAPHY.

[1]James C. White. Jour. Cut. and Gen.-Urin. Dis., 1900, p. 536.

[2]Unna, Santi and Pollitzer. Monatshefte f. prakt. Dermat., vol. 10, pp. 405, 444.

[3]Colcott Fox and J. M. H. Macleod. Jour. Cut. and Gen.-Urin. Dis., 1901, Sept., p. 424.

[4]Brocq. Revue générale de Clinique et de Thérapeutique, 1897.

ILLUSTRATIONS.

Fig. 1. *Low power.* Represents the section as a whole with the most gravely affected regions of the corium and of the epidermis in the centre of the photograph. The great atrophy of the epidermis and the disorganized condition of the corium are well shown. On each side of the photograph the corium is beginning to appear more normal and on the left hand the various normal deeper structures are present. Hæmatoxylin-eosin.

Fig. 2. *High power.* Represents the most severely affected area of the epidermis. The rather increased stratum corneum and the marked changes of the other layers are clearly seen. Hæmatoxylin-eosin.

MYOSITIS SYPHILITICA.

By J. A. Fordyce, M.D., New York.

THE involvement of the muscular system by syphilis is of relatively rare occurrence.

Matzenaur,[1] in Neumann's clinic, has observed, in the early period of the disease, one or two cases among seven thousand patients with syphilis.

The early so-called myalgias may be due to hyperæmia with slight exudation in the connective tissue of these organs, or to irritation of the peripheral nerves by the disseminated poison of the disease. They have, as a rule, little clinical significance, as they usually rapidly disappear.

The majority of the text-books on syphilis speak only of the diffuse interstitial myositis of the early period and the circumscribed gummatous tumors of the late stage. It is not always possible, however, to assign the cases seen in our clinics to these two groups.

In malignant precocious syphilis, gummata, usually in several muscles, have been observed in the early period of the disease.

Matzenaur[2] has seen multiple diffuse myositis and gummata in the same patient and the same conditions in the late stages of the affection. He has also called attention to the occurrence of muscle abscess following a diffuse myositis four and seven months after infection.

A single muscle gumma in late syphilis can readily be mistaken for a sarcoma or other muscle tumors or infiltrations.

Hartley[3] has recently emphasized the importance of syphilis from the surgeon's standpoint, and has called attention to numerous errors in diagnosis in these and other specific conditions.

The possibilities of syphilis are perhaps not so keenly appreciated by the general surgeon as by the syphiligrapher, and for this reason the observations of the one should supplement those of the other.

Another type of myositis presumably of syphilitic origin has been described by Herrick,[4] in which a syphilitic patient suddenly developed painful swellings in the supinator longus and in the calf muscles.

[1]Monatsheft f. prakt. derm., Band 35, Nos. 10 and 11, pp. 465 and 523, 1902.
[2]Loc. cit.
[3]Some Surgical Aspects of Syphilis, *Med. News,* Sept. 23 and 30, 1899.
[4]The Am. Jour. of the Med. Sciences, Vol. CXI, No. 4, 1896, p. 414.

An examination of excised pieces of the involved tissues showed a diffuse inflammation with hæmorrhages.

He failed to find either vegetable or animal parasites, and attributed the condition to a specific infection ten years before the present trouble began.

The author's critical comparison of his own case with the disease known as polymyositis acuta leaves us in doubt as to its true nature.

The disappearance of the muscle swelling under such doubtful antisyphilitic treatment as iodine and iodide of potassium ointment scarcely lend weight to such a diagnosis.

The histological investigations of Matzenaur show that the initial changes in the interstitial myositis and the gummatous variety are the same. In early syphilis the inflammatory process tending rather to diffuse changes, while in late syphilis more sharply circumscribed infiltrations result.

The blood vessels of the inter-fibrillary connective tissue are first implicated; the muscle substance being secondarily involved.

The preservation of the functional integrity of the muscle can only be scured by early recognition of the nature of the disease and a prompt recourse to specific remedies.

The results of the affection are seen in the sclerotic changes which take place in the tongue as a result of chronic interstitial myositis of this organ.

The more common types of syphilitic myositis are illustrated by the following cases:

Case I.[5]—The patient, a man, aged 35, had late secondary manifestations in the form of a large papular syphilide of the trunk. The left sterno-cleido-mastoid was swollen, hard and resisting to the touch. The entire length of the muscle from origin to insertion was involved, the borders being ill defined. The swollen muscle which was in its largest part the size of the closed fist, was much reduced in two weeks by local and general specific treatment.

Case II.—This case, which was for a short time only under my observation, is an example of the combined interstitial and gummatous type of myositis. The patient, about 30 years old, was infected with syphilis five years ago. The early treatment of the disease was imperfectly carried out. Five months previously he began to suffer with slight pain and impaired mobility of the right sterno-mastoid muscle.

As shown in the accompanying photograph (Fig. 1), the muscle

[5]The history of this case was kindly given to me by Dr. P. A. Morrow.

PLATE XIX.—To Illustrate Dr. John A. Fordyce's Article.



Fig. 1.



Fig. 2.

stands out prominently from the surrounding tissues, and is the seat of a number of irregular fistulous openings which discharge a sero-purulent fluid. The condition is not unlike that seen in breaking down strumous lymph nodes. The muscle is somewhat tender on pressure, and when made tense he complains of more acute pain. The motion of the head is limited by the impaired contractile power of the muscle. The patient asked for admission to a hospital, and I have not had an opportunity to observe the case further.

A striking similarity is shown in the illustration to breaking down tuberculous lymph nodes. The involvement of the entire length of the muscle, due to an interstitial inflammation, is a feature which should exclude the tubercular affection.

Case III.—This patient, a woman, forty years old, contracted syphilis five months before the photograph (Fig. II) was taken. She had for some time been addicted to the liberal use of alcohol and continued taking it during the time she was under observation. She developed a severe papulo-pustular eruption with numerous lesions on the tonsils. A swelling appeared over the right sterno-mastoid muscle which eventually opened and discharged pus, leaving two irregularly outlined ulcers as shown in the illustration. Under specific medication the ulcers healed and the muscle enlargement slowly disappeared Because of the throat lesion a mixed infection in this case could not with certainty be excluded.

A NEW FORM OF FOCUS TUBE.

By Charles Warrenne Allen, M.D., New York.

THE rays from the target in the focus tube now in use, do not emanate in all directions with equal intensity, but follow the same rule as light waves from a flat illuminated surface, and are the strongest in a line at right angles to the surface, and steadily decrease at every increase of the angle of obliquity. In the case of illuminating rays, as is well known, the decrease is as the cosine of the angle, and in a direction corresponding with that of the plane of the illuminated surface, the light becomes nil. In the case of the X-rays it can be assumed that the rule would be the same if the rays came from a geometric point, but on account of the size of the area from which the rays emanate, there are some rays at the plane of the anode. The greatest intensity of the rays is, as in the case of light rays, in a direction perpendicular to the plane of the anode, and in a line passing through the point on the anode at which the kathode stream impinges. It is therefore very inconvenient in the tube of ordinary construction to utilize these rays, on account of their direction being away from the center of the tube and in a direction toward the kathode. In the tube here presented, devised by Dr. Milton Franklin, the rays of greatest intensity pass from the tube in a direction corresponding with the center of the free side of the bulb, and the strength of the rays at any angle to the right or left of this center will be the same. In aiming the rays at any part, an exact indication of the direction of the most powerful rays can be obtained from the annex through which the target support is directed.

The essential feature of the tube, and wherein it differs from others, is in the position of the target and the kathode. The annex through which the target enters is placed midway between the other two provided for the second anode and the kathode, and the plate of the target placed at right angles to its stem, presents a plane at right angles to a line passing through the free boundary of the tube midway between the anode and kathode annexes. The kathode is inclined to its stem in an angle of about thirty degrees so that the kathode stream impinges upon the target at an angle of about sixty degrees.

PLATE XX.—To Illustrate Dr. Charles Warrenne Allen's Article.

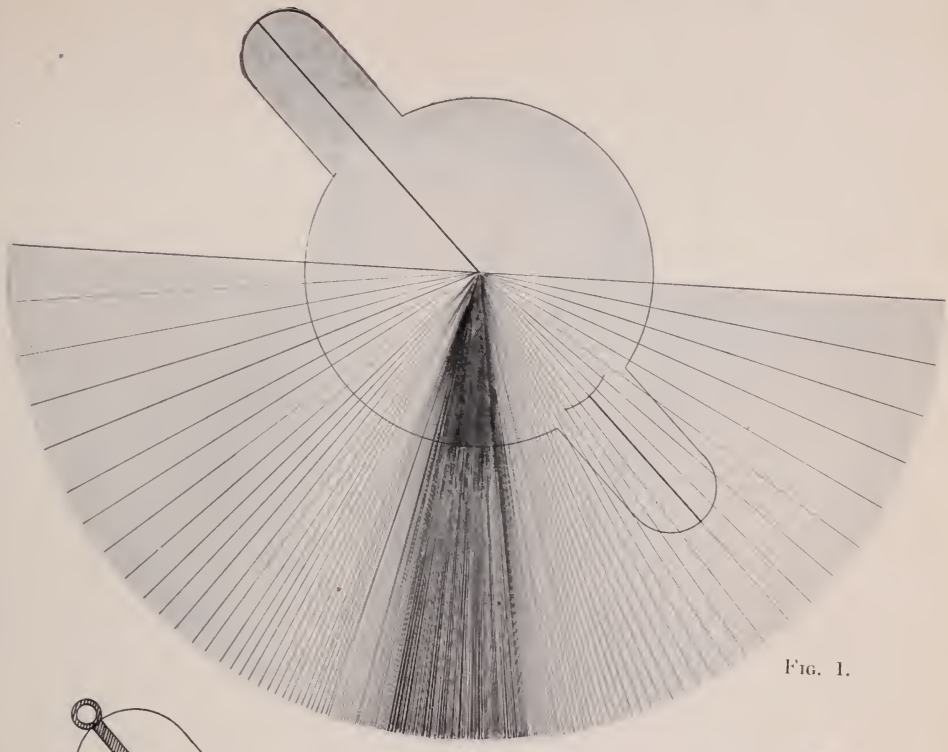


Fig. 1.

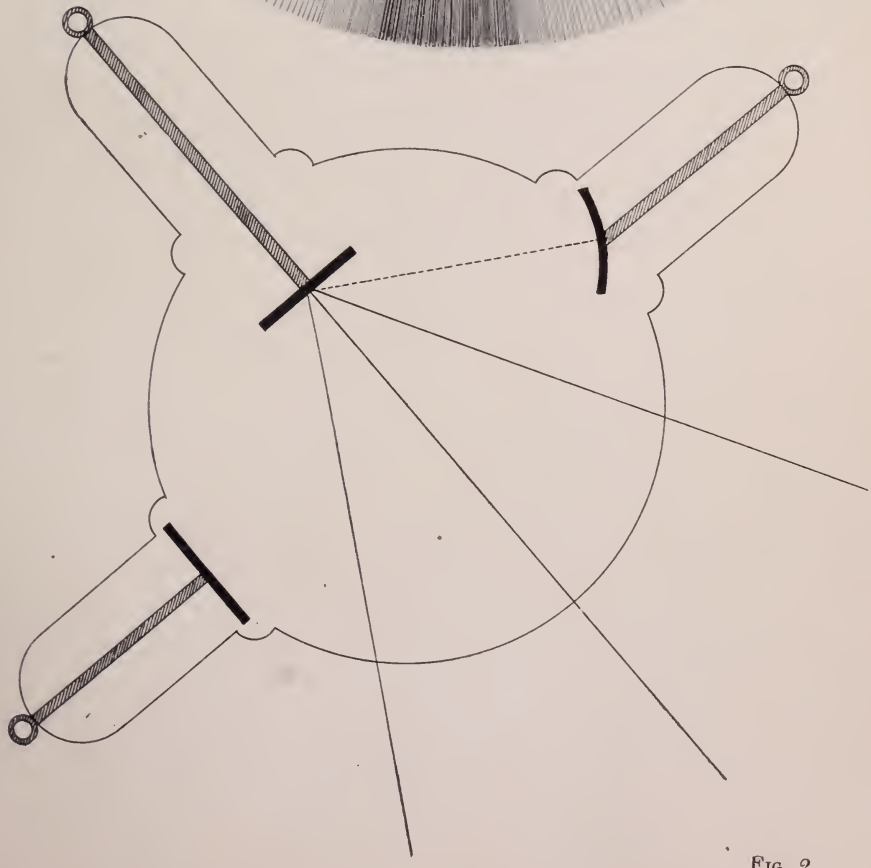


Fig. 2.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

Three Hundred and Eighth Regular Meeting, November 25, 1902.

OSCAR H. HOLDER, M.D., President.

(*Continued from page* 151.)

A Case of Multiple Sarcomatosis. (See page 150.)

A Case of Granuloma Fungoides. Presented by Dr. Lustgarten.

The patient was a man, forty years of age, who came to this country eleven years ago. There was no hereditary disposition. Four years ago red patches first appeared on the right side and spread to the extremities. There was associated with this some itching and a tendency to disappear and reappear. About two years ago there was a considerable outbreak, the eruption extending to some parts of the face and body, and with this the itching became intense and unbearable. He had been under treatment at the Mount Sinai Hospital since May 26th last, and he had received hypodermic injections of a two per cent. solution of sodium arsenite and carbolic acid. He had received altogether 68 injections, or about 30 grains of arsenic. A good many of the spots had disappeared, and there was less itching, but there were still many lesions in the florid stage.

Dr. ALLEN said he would make a diagnosis of mycosis fungoides from the clinical appearances rather than of multiple sarcoma. The case was extremely interesting in view of the fact that the microscope showed it to be sarcoma. The other patient had come to his own office some time ago in a horrible condition. At that time the man was haggard and thin and almost crazy from loss of sleep and the incessant scratching. The lesions were in the premycotic stage, being those of an eczema covering nearly the entire body. The man was given the static breeze, and was painted with methylene blue, and although slightly relieved he was impatient and left.

Dr. L. DUNCAN BULKLEY said he was interested at the large quantity of arsenic the case of sarcoma could tolerate. With regard to the case of mycosis he was reminded of a hospital case in which there had been an undoubted eczema for some time. While under observation the patient developed mycosis fungoides, and subsequently died of it. There was not a doubt about the previous condition being eczema.

Dr. J. A. FORDYCE did not think it was fair to criticise the diagnosis of sarcoma because it had been so long under Dr. Lustgarten's care. Clinically the case looked more like mycosis than multiple sarcoma. Dr. Grover Wende, of Buffalo, had shown him a case of multiple sarcoma

that had been entirely cured by injections of arsenic. Enormous doses had been given subcutaneously for a period of two years.

Dr. Sherwell said these cases presented by Dr. Lustgarten and reports of treatment had been of great interest to him. He had, many years ago, reported and shown cases of sarcoma treated by arsenic internally with success. In one the patient was under his observation and care six months. He had removed several quite large tumors, which, by several competent histologists, were pronounced decidedly sarcomatous. He had given arsenic in increasing doses till more than two drams of Fowler's Sol. were taken daily, with resulting disappearance of a very large number of smaller tumors. There even seemed to be an atrophic pitting at their sites. The patient had then gone to visit his friends in the country for a prolonged stay, had neglected his treatment, with the consequences of rapid return of tumor formation in immense numbers. About that time, he fell into the hands of Dr. Wheeler, Burlington, Vermont, who at first excised some hundreds, but finding them ever increasing, he was put under the same original (my) treatment, with perfect result. He again returned to his friend and was dissuaded from the continuance of medication. The tumors reappeared and some time afterward, about eighteen months from first report, he died. Dr. S. considered the first case of Dr. Lustgarten a sarcomatous one, although somewhat atypical; the other case, one of mycosis fungoides. It was, he believed, still a question among pathologists as to the histologic identity of these two diseases. Dr. S. believed strongly in the beneficent and inhibitive virtue of arsenic in both this cacoplastic embryonic fibrous form of tumor and epitheliomata and also believed a union of the hypodermatic and oral methods would be found the best.

Dr. Robinson said he could not see any difference between the lesions on the back and shoulders of the case of sarcoma and mycosis fungoides. The other case he had seen on two occasions about a year and a half ago, and had recognized it then as mycosis fungoides. Of course, both diseases were sarcomatous in their nature.

Dr. Fox said he accepted the diagnosis of multiple sarcomatosis because Dr. Lustgarten had made it after a careful study of the cases, yet from the clinical standpoint the case appeared at the present time to be one of mycosis fungoides. He recalled very distinctly how the patient looked two years ago when presented to the society. The dark patches on the skin at that time did not suggest mycosis to him, and the absence of itching was certainly a peculiar feature not observed in other cases of mycosis. With regard to the arsenic injections, he was glad to learn that improvement was taking place, but he believed the result would be the same as in other cases in which this treatment had been or had not been employed.

Dr. P. A. Morrow said that if the first patient had come to him for diagnosis he would have made an unqualified diagnosis of mycosis fun-

goides. There was, however, some relationship between this disease and sarcoma. He would like Dr. Lustgarten to state whether the differential diagnosis was made upon the microscopical findings or upon other peculiarities. Dr. Sherwell had not mentioned a case that had been under his observation at one time—a very typical case of mycosis fungoides. Months afterward he learned that the woman had been under Dr. Elliot's care, and that the latter had examined one of the growths and had found evidence of sarcoma. The other case presented by Dr. Lustgarten left no doubt about the diagnosis, although the pigmentation was exceedingly marked and extensive, and the itching was very severe. It was difficult to estimate the value of any treatment in these cases, because there were apparently periods of spontaneous improvement. In two of his cases there had been marked improvement from time to time under very simple treatment. In a private case he had used subcutaneous injections of arsenic in the region of the tumors upon the arm and thigh and the near-by tumors seemed to disappear, whereas, the general appearance of the eruption elsewhere was comparatively unaffected. There was undoubtedly a certain influence from the use of arsenic, but he was skeptical about its curative power.

Dr. H. H. Whitehouse said that if the first case was one of mycosis fungoides it was certainly a peculiar one and different from any he had ever seen. One remedy, he thought, might be used more than it had been in these cases, for there was always a time when arsenic failed to effect improvement and we had to cast about for some other remedy. The treatment referred to was with chaulmoogra oil; this can often be used advantageously in alternation with arsenic.

Dr. J. C. Johnston said that he was inclined to accept the diagnosis of sarcoma in the first case, because of the microscopical findings, although he did not deny that the clinical picture was strikingly like that of mycosis fungoides. Sarcoma begins in the reticular layer and in the subcutaneous tissue, mycosis fungoides in the papillary body. The reason mycosis fungoides ulcerates so often is because the growth lies so close to the surface, and interferes with the nutrition of the epidermis, which becomes so susceptible to injury. Diagnosis cannot be based on fungoid growth, for it is seen in both conditions. He had a myxosarcoma and a fibrosarcoma in his collection in which the fungoid growth was quite prominent. There was another differential point in the histology of sarcomatosis cutis, and that was the presence, which he had found universal, of endothelial proliferation. When these tumors underwent spontaneous involution, the fibroblastic portion disappeared, leaving nothing but an endothelial growth, which gave the tumor the appearance so much like endothelioma that he had succeeded by exhibiting one portion only in misleading a number of pathologists. In fibroblastic sarcomata there were found elongated spindles. These cells occur only rarely in mycosis fungoides where the cells were of an epitheliode type, and were

polygonal and not spindle-shaped. The reason treatment gave such poor results was probably that the patients did not continue it for a sufficient length of time.

Dr. George T. Elliot said with regard to the case referred to by Dr. Morrow, that he had made a diagnosis of mycosis fungoides. The ulceration referred to was not a fungoid tumor, but an ulceration which showed under the microscope the characteristics of an epithelioma. He only saw her in the eczematous stage, not in the tumor stage. With regard to the first case presented by Dr. Lustgarten, he would consider it one of mycosis fungoides because of the very distinct clinical symptoms. In his opinion it did not resemble sarcoma clinically and he had considered it mycosis when the case had been seen two years ago. The sections under the microscope appeared to him to represent mycosis fungoides. The stroma seemed to be very deficient and the whole section to be made up of granulation cells. In variance with Dr. Johnston's statements he would say that in an unquestioned case of mycosis fungoides, one which Dr. Fox treated, the whole fatty tissue was infiltrated throughout. As regards treatment he would say that some 15 years ago Dr. Fox had given chaulmoogra oil in large quantities to a case of mycosis fungoides, but, unfortunately, the results had not been satisfactory. The use of the oil was not made again, as far as he knew, until about three years ago when Dr. I. Dyer, of New Orleans began to give it to a patient who was under the care of himself and the speaker. It certainly had acted very beneficially in the case. In another case which had been under the speaker's care since last spring, the same oil had been given and there had been a decided decrease in the intensity of the process and a relief of the itching. Dr. Lustgarten's second case was without question one of mycosis fungoides.

Dr. Lustgarten said that when he presented the case two years ago there were the same differences of opinion as now. The tumor formation was, of course, not specific to granuloma, and the superficial lesions seemed to him a unique symptom in sarcoma. If it were looked upon as a granuloma, a number of symptoms considered as absolutely characteristic of granuloma fungoides, were eliminated, *i. e.*, the pinkish color, the intense itching, the early involvement of the face, the quick formation and disappearance of the tumors. This man had had no treatment for a year and a half, and the process had simply increased, but there had been no involution. Again, the tumor formation itself was not like granuloma fungoides, being too smooth and fibrous with lack of the peculiar surface appearance of granuloma tumors. The microscopical findings indicated sarcomatous tumors rather than granuloma fungoides.

A Case of Indigenous Lupus of Face and Hard Palate. Presented by Dr. S. Lustgarten.

The patient was a girl of ten years, born in this country. She had received about forty Roentgen ray exposures with moderate improvement. A comparison with the photograph taken before the treatment showed what had been accomplished. There was a very characteristic lupus of the hard palate. On the hand and in other places were patches which had been very satisfactorily treated with the following strong resorcin ointment: 40 parts of vaseline, 20 parts of lanolin, and 30 parts of resorcin. This is spread on linen and the application is left on for four or five days, or until a considerable reaction develops.

Dr. C. W. Allen said he was surprised that the X-ray had not shown more effect. He had a woman with lupus vulgaris of the face, neck and ears, which had existed since childhood. She had had only three applications of the X-ray and the process had been almost completely eradicated. The patient was burned by the X-ray, but this burn was limited strictly to the lupus area. In some other lupus cases also there had been steady improvement.

Dr. Lustgarten said that the exposures were given three times a week, at a distance of eight inches and an exposure of ten minutes, and the results, though not brilliant, were positive. He had not personally given the X-ray treatment. The other parts seemed to do remarkably well under the resorcin treatment.

A Case of Xanthoma Diabeticorum. Presented by Dr. S. Lustgarten.

The patient was a married woman of forty-two years. The first symptoms appeared five years ago with considerable itching. The symptoms disappeared for a weeks, two years ago after a miscarriage. In June of the present year they became much worse, the itching being almost unbearable. The urine had a specific gravity of 1024 to 1029, and contained four or five per cent. of sugar.

Dr. G. T. Elliot said that five or six years ago he had had a case presenting exactly the same appearance, especially about the elbows and popliteal spaces, but also on other parts. The appearances suggested a keloidal formation, having the xanthoma lesion as a point of inception. In his case there was also glycosuria; the percentage of sugar varying from·5 to 8 per cent.

Dr. Johnson said this was the case reported by Dr. Sherwell and himself. The lesions in the elbows and the popliteal spaces were not present at that time, and the development in the palm was much less then now. This disease imitated every other form of xanthoma, even xanthoma of the eyelids. The relationship to tuberose xanthoma he was now prepared to admit, although the one did not recover spontaneously while

the other might do so if the diabetes were cured, an essential difference.

Dr. S. Sherwell said that he recognized this patient as the one already reported upon in the Journal by himself. There had been at that time hardly any part of the body, except the eyelids, which was not the seat of the tumors. The one new feature was the moniliform character of eruption in the flexures. She was unable to lie comfortably in any position because of the pain produced by pressure upon the numerous nodules or tumors. There was eight per cent. of sugar in the urine, but this decreased under the ordinary treatment for diabetes—hygienic and dietetic, and the internal use of alkalies and of arsenic. The improvement had been marked and extremely rapid. This occurred two or three times afterward, and then the patient passed from under observation.

Dr. Allen said that the peculiar moniliform lesions at the flexures of the elbows were interesting as indicating that such lesions were not confined to lichen.

Dr. Lustgarten said that the tumors of the tuberose form did not present quite the same appearance as in xanthoma diabeticorum. The theories regarding its etiology were by no means satisfactory. Even under dietetic treatment he had found it impossible to reduce the sugar below four per cent., and the improvement in the lesions recently had not been marked. He suspected that the diabetes in these cases was a special variety, the chemical nature of which was not yet understood, otherwise it would be difficult to explain the great frequency of diabetes and the rarity of xanthoma diabeticorum.

A Case for Diagnosis. Presented by Dr. H. H. Whitehouse.

The patient was a woman about 35 years old in whom the eruption, which was confined to the checks, began four months ago. It appeared first on the left cheek in an erythematous patch which resembled a ringworm. This broke up into smaller patches, but did not entirely disappear. About two months ago the eruption developed on the right cheek in the form of a round, solid red patch with considerable infiltration. Smaller irregular shaped patches appeared on the side of the nose, which varied in color from time to time, but did not disappear. There was neither crusting nor scaling, but the patient complained of itching.

Dr. Elliot thought the case was one of morphœa before the occurrence of atrophy.

Dr. Bronson thought it was a case of lupus erythematosus before the atrophic stage, or one of those cases which do not go on to atrophy.

Dr. Fordyce said he had seen similar lesions, which had gone on to atrophy and eventually presented the lesions of lupus erythematosus, and he, therefore, agreed with Dr. Bronson.

Dr. Bulkley thought it was a very early stage of lupus erythematosus; in five or six months the lesions would be more characteristic.

Dr. Allen thought the affection would develop into a typical lupus erythematosus.

Dr. Dade took the same view of the case.

Dr. Whitehouse said he was inclined to that diagnosis the other day, and had consequently prescribed one-grain iodoform pills.

NEW YORK DERMATOLOGICAL SOCIETY.

309th Regular Meeting, December 16, 1902.

Oscar H. Holder, M.D., President.

A Case of Lupus of the Nose Under X-Ray Treatment.

Dr. G. H. Fox exhibited a patient with lupus of the nose, who had been previously presented to the society, with the object of showing what was being accomplished by the X-ray.

Dr. C. W. Allen thought the case was progressing favorably.

Dr. Fox again called attention to the good results of the burr and carbolic acid treatment, and remarked that the only objection to that method was that it was very painful. But the X-ray in this case had caused inflammation about the eyes, which the patient claimed was even more painful.

A Case of Epithelioma of the Face, Showing Failure of the X-Ray.

Presented by Dr. Daniel Lewis.

The patient was a man of seventy-five, giving a history of three or four years' duration. Cancer had appeared near the inner canthus of the left eye. It had been treated by cauterization, then by operation, and finally by X-ray treatment carried out for about six months. The case was presented to show a failure of the X-ray treatment to cure epithelioma of the face. He thought the X-ray was not applicable to cases in which the disease was so close to the eye because if applied in proper strength it was apt to injure the eye. He had removed one-third of the lower lid because of involvement of this portion by the disease.

Dr. A. R. Robinson said that in all cases in which the lesion was deeply seated and more or less covered by epithelium the X-ray did not work well until the epithelium had been destroyed. If one method alone must be used, caustic would be better than the X-ray; the combination of the two methods, however, would be still better. In his opinion, there was no difficulty in treating such cases with the X-ray without injury to the eye. Experiments also seemed to show that the eye was not very easily affected by the X-ray, and this probably explained why the results were apt to be poor when there was normal epithelium between the X-ray and the disease to be treated.

Dr. Allen said that the case looked to him like one in which the X-ray treatment would be suitable now that an open surface had been left by operation. From the first he had advocated and practiced the combined use of the older with the newer methods. He constantly made use of caustic paste in connection with the X-ray, and secured quicker and better results in this way. The speaker said that if a physician developed epithelioma of the hand while treating cancer with the ray, the question of contagion would naturally be suggested, and it might be claimed that he had contracted the disease from the patient he had treated. Whereas, we know that cancer may follow the ray-burn without the element of contagion entering into the question. Dr. Allen said he had been treating a case of severe X-ray burn in which carcinoma had developed subsequently to the burn in a man who—so far as known—had not been exposed to contagion.

Dr. J. C. Johnston said with regard to the condition occurring on the hands of X-ray operators, that he had reported two cases in which a xeroderma accompanied by keratosis, following exposure to the X-ray for a considerable time, had resulted in epithelioma. Here and there on the skin appeared the same kind of pre-cancerous growths observed in elderly people. One case of this sort was referred to, occuring in a well-known surgeon. Here the portion examined was distinctly carcinomatous.

Dr. J. A. Fordyce said that epitheliomata, like the one presented by Dr. Lewis, were peculiarly rebellious to all forms of treatment. He would like to ask Dr. Lewis how long he had kept up the X-ray treatment, and why he considered it a failure.

Dr. Lewis replied that the X-ray treatment had been carried out by another person for a period of about three months, the patient being treated every second day. He had presented this patient partly to ascertain whether the members of the society had ever seen an epithelioma absolutely cured. He had been observing cases for the past six months. One of them was absolutely favorable to X-ray treatment because it was an ulcerating surface epithelioma. In another case the epithelioma was located between the outer canthus and the ear, an ideal place for the treatment. This man had been burned several times, so that the treatment had to be suspended; at other times, the surface had appeared to be free from the disease, and the treatment had ben suspended, but the disease had recurred. Now, after about one year, the diseased area was only a trifle smaller than at the commencement. The speaker said that he was constantly hearing of cures that had been effected, but he had not been able to see these cases, and he had been told the same thing while on a recent visit to London. In his opinion these cases should be treated primarily by most thorough operation. He had had a number of cases that had been thoroughly cured by operation in this locality. He did not think this patient would be cured unless the eyeball were extirpated, and probably some of the bone removed. The danger of the X-ray,

as used at the present time, seemed to be its universal application to all cases, whether favorable or unfavorable—in other words, the use of the X-ray as a fad.

Dr. Allen referred to the case presented by him at the last meeting, the lady who had been subjected to a short course of X-ray treatment. She appeared to be very nearly well. Almost a year ago he had presented to the society a woman with an epithelioma of the forehead, who had shown no recurrence since that time, and there was a perfectly smooth, soft cicatrix. Up to the present time he had discharged 29 cases as cured.

Dr. Robinson said that Dr. Sequira, of the London Hospital, had reported 35 cures out of 84 cases treated by him.

Dr. J. M. Winfield said that he had a case in the Kings County Hospital in which, after about 21 exposures, an epithelioma of the face had been cured. This was about eight months ago, and there had been no recurrence. The diagnosis had been thoroughly substantiated before beginning the treatment.

Dr. Fox said with regard to the unnecessary use of the X-ray, that he could report a case in which a superficial epithelioma of the temporal region had had 90 X-ray applications, and yet in a few minutes, by means of the burr, a cure was effected. He was still under the impression that the case referred to by Dr. Allen as nearly well could have been quickly cured by the curette. Thorough curetting and boring out the nodules with the burr seemed to him to give the best result in the shortest time. Reference was then made to a case of keloid of the back of the neck, which he had tried in vain to cure in various ways at the hospital. This case had finally been most satisfactorily treated by the X-ray, and the result so far, although not complete, was a brilliant one.

Dr. Lewis said that he had in his possession a series of photographs of the first case published in London. It occurred in the Middlesex Hospital, and was a superficial carcinoma of the breast of several years' duration, occuring in an old person. He had had an opportunity of seeing this case, and had learned six months later from Mr. Hutchinson that there had been no more improvement. The improvement that had been effected was not great, as was shown by the photographs.

Dr. E. B. Bronson referred to a case of recurrent carcinoma that followed amputation of the breast fifteen or twenty years ago. The cancerous nodules, he said, were found all over the anterior portion of the thorax, as well as under the scapula, and the glands of the axillæ were very much enlarged. The patient had despaired of any relief, and in the prospect of death had disposed of nearly all she owned. Having heard of the results accomplished by the X-rays, she thought it a duty to try their effect in her case. She was referred to Dr. Alexander Johnson. After about forty exposures the improvement was marvelous, not only in the local condition but in the general health of the lady. Cer-

tainly this patient's condition was greatly ameliorated and her life was prolonged.

Dr. Allen expressed the opinion that in these cases of cancer *en cuirasse,* the X-ray was especially suitable. This opinion was based upon two cases. One of them had been sent to him by Dr. John Walker. The patient accidentally received an X-ray burn, and after this had healed the operation scar was as smooth as the rest of the skin. The patient subsequently died, it was said from pneumonia, but as she was strongly jaundiced he strongly suspected that she died of cancer of the liver. He had not included that case among his cures, though the skin cancer, for which she had been sent, was cured. The other case was one of primary carcinoma. There was extension around the chest to the back, and the outlying nodules threatened to break down. Many of these had shriveled up under the X-ray treatment, leaving a keloidal looking plaque, but even with the surrounding surface. The patient had not been expected to live more than three months when first seen last January, and if the X-ray treatment had not been adopted he did not know of anything else that could have been done for her. At the present time she was slowly but steadily improving, and the ulcer was slowly cicatrizing from the margin, but very slowly. The fact that the patient was well and free from the disagreeable features of the advanced stages of cancer, spoke a great deal in favor of the treatment. The relief afforded had amply paid, even if nothing else were accomplished. Dr. Allen also spoke of a case of cancer of the rectum in which the patient was in a horrible condition. By X-ray treatment fairly good control of the sphincter was restored, and he was enabled to sleep without narcotics, and his last days were made comfortable. During this period the growth in the rectum diminished, but there was extension or metastasis in other parts.

A Case Presented for Diagnosis. By Dr. E. B. Bronson.

The disease began on the hands last March in the form of a keratosis. There had been some redness of the skin with thickening of the epidermis and a tendency to the production of fissures. A similar condition occurred subsequently just above the anus. About three months ago a different appearing eruption was discovered on the sides of the trunk, and on the extremities. It occurred in the form of small scaly lesions grouped in plaques of a somewhat reddened surface with no subjective symptoms of irritation. It bore some resemblance to pityriasis rosea, but the fact of its persistence for three months led him to think it more closely allied to a parakeratosis.

Dr. George Thomas Jackson said he regarded the case as a seborrhœal dermatitis. The appearances on the hands he thought were those regarded as characteristic of that disease.

Dr. Fordyce thought it was more closely allied to seborrhoic derma-

titis than to any other clinical picture with which he was familiar, though the condition was very unusual.

Dr. J. C. Johnston said that in Edinburgh, in 1898, he had seen two cases, which had been presented at the clinic at the Edinburgh University as lichen ruber. Unna, who was there, pronounced them both to be parakeratosis variegata. He claimed that the location was chiefly the anterior surface of the trunk, particularly the chest. The flexor surfaces were not so much attacked. The patches on the abdomen of the man presented this evening made him still more inclined to make a diagnosis of parakeratosis variegata. Seborrhoic dermatitis was amenable to treatment, while parakeratosis, according to Unna, was absolutely insusceptible to any known treatment.

Dr. Robinson said that he had seen the patient some months ago, and the appearance did not seem to have changed, especially since then. He was unable to make a diagnosis.

Dr. Fox said he regarded pityriasis rosea as a disease only imperfectly described by Gibert. Clinical observations taught that pityriasis rosea, lichen circinatus, eczema marginatum, seborrhoic dermatitis, and some other diseases, possibly parakeratosis variegata, were so closely related as to warrant being included under one term—viz.: pityriasis. He believed the tendency to the circular form, the superficial inflammation and the slight desquamation of the skin, were the chief clinical characteristics, and that the disease was as distinct an affection as eczema or psoriasis, though often resembling eczema, on the one hand, and psoriasis on the other. He had in his possession pictures showing the axilla affected, together with the typical rings and oval patches on the chest; others showing the groins or thighs affected with what he formerly regarded as ringworm of the crotch. The case under discussion he would describe as pityriasis diffusa. Whether it occurred in macules or in the extensive marginate patches, or whether acute or chronic, was immaterial. He had seen these cases become chronic just as he had observed eczema become chronic. He thought instead of dividing them all up, giving them different names, it was an advance to class tham all together.

Dr. Bronson said that the case presented a somewhat different appearance to-night because of the treatment. There was considerable congestion which really did not belong to it. When first seen there was absolutely no evidence of active inflammation; there was no thickening or redness, only a dusky brownish appearance of the patches, reddened here and there, and the latter were covered with scales. Many of the lesions were oval or circinate. As to the resemblance to eczema seborrhoicum, it seemed to him that this was a very much more superficial disease; eczema seborrhoicum gave decided crusting and more or less excoriation from scratching. In this patient there was no itching, and the disease had been discovered by accident while taking a Turkish bath.

With regard to pityriasis rosea he regarded it as a disease of much less duration, and attended by much greater evidence of inflammation; there was also a tendency to contagion or, at least, to the occurrence of the disease in several members of a family. In parakeratosis variegata there was some papulation, and underneath the scales was a peculiar glazed condition of the skin. White declared that the disease did not involve the palms, so that there was a suspicion that in the case presented the two diseased conditions might be independent.

It was thought that the case bore more resemblance to what Brocq had described under the name *érythrodermie pityriasique en plaques disseminées* than it did to Unna's parakeratosis variegata.

Dr. Allen said that some of the lesions on the abdomen resembled somewhat pityriasis rosea, and he would have liked to have these patches tested with Lugol's solution. This case could be one of pityriasis rosea, which affection takes on many different forms. Under treatment and bathing, large patches sometimes formed such as seen in the case presented. With regard to the occurrence of pityriasis rosea in several members of a family, he would say that he had had two brothers, one the owner and the other a worker in a Turkish bath. Both developed pityriasis rosea, and they were charged not to bathe and run around naked as they had done before. The fact that the patient presented had lesions on the palms, did not speak against pityriasis rosea. The speaker had shown to Dr. Fox and Dr. Fordyce at one time a most typical case of pityriasis rosea in which the lesions on the palms were marked and peculiar. The lesions on the palms were deeply seated, and they recovered coincidentally with the lesions on other parts.

Dr. Fordyce said that he had under observation a case of pityriasis rosea affecting only the extremities, which had proved very obstinate to treatment.

Dr. S. Lustgarten said that he had obtained good results from 4 per cent. resorcin, 1 per cent. salicylic acid, and 50 per cent. alcohol.

A Rabbit Affected with Sarcoptes Scabei.

Dr. A. D. Mewborn presented this animal on account of the resemblance of the piled-up crusts to those found in Norwegian itch and for the benefit of laboratory workers, by whom it might easily be mistaken for ringworm. This rabbit was one of six affected in the Pediatrics Laboratory. The parts mostly affected were the eyelids, nose, base of the ears, and scattered patches on the legs. The most typical lesion was a projection about one-half inch high on the tip of the nose, composed of matted hairs, epidermic scales and coagulated serum in which were an immense number of sarcoptes. There was no formation of furrows as in the human subject, but there was excessive hyperkeratosis and serous exudation. A vertical section through the projection on the end of the nose showed almost vertical furrows in which could be seen the excrement and

ovæ of the itch-mite. A number of the sarcoptes could be seen trying to burrow down into the hair follicle. The sarcoptes in the rabbit were not longer than 275 micra, while that of man may measure 350 to 400 micra. The rabbit sarcoptes is identically like the human sarcoptes in appearance,—the female having four front legs armed with palpi and the four hind legs provided with hairs.

It will be recalled that the variety of human itch called Norwegian itch, is characterized by the absence of furrows, by the piled-up crusts and by the fact that the scalp, eye-lids, ears and nails are affected.

A section of one of the nodules was shown under the microscope.

BOSTON DERMATOLOGICAL CLUB.

The regular monthly meeting was held on December 30th, 1902,

Dr. J. H. McCollom, in the chair.

A Case for Diagnosis.

Dr. G. F. Harding presented a young Irish girl, aged thirteen, who was treated in June, 1902, for tonsillitis. The mother said that at the same time there was an eruption on the forehead which subsequently spread over the body and the patient was given pills.

On examination mucous patches appeared on both tonsils and the pharynx was reddened. The arms showed marked passive congestion and many large hyperæmic macules, some of which had dry crusts upon them. The body presented no marked lesions. Beginning at the middle of the thighs and extending downwards to the lower third of the legs were large pigmented squamous spots, some of which were covered with dried crusts. The toes were red and moist and exhibited distinct tendency toward superficial ulceration. The legs were markedly congested. The soles had wide-spread infiltrated areas, dull red-brown in color with somewhat raised, scaling and serpiginous border. Epitrochlear and cervical glands were easily palpable.

In the discussion Dr. J. C. White said that the disease was syphilis, but did not feel positive about its age or its ætiology. The type of the efflorescence on the lower legs looked almost hæmorrhagic resembling certain cases of erythema nodosum.

Dr. C. J. White said that the lesions on the legs were the remains of a previous process which had left pigmentation behind it. The poor circulation, he thought, had been a factor in the severity of the disease, which he considered to be of perhaps eight or nine months' duration.

Dr. J. S. Howe considered the case to be one of syphilis, and stated

that he did not consider it at all rare to find acquired syphilis among the children of the poor.

Dr. A. Post asked Dr. Harding when the tonsil first attracted attention. Dr. Harding replied that the case had been entered as tonsillitis in the books of the throat department of the Boston City Hospital in June, 1902, and that the tonsils had then been incised. Dr. Post then said that the most characteristic lesions were those about the toes and feet—those of the toes being really mucous patches. He felt that acquired syphilis at the age of thirteen or at any age could not be considered an unusual phenomenon among the very destitute and careless.

Dr. J. H. McCollum said that the involvement of the tonsil interested him as he had seen during the last few months several so-called diphtheritic tonsils which had been merely syphilitic. He did not regard the tonsils in this case as the primary seat of the disease.

Dr. Harding, in closing the discussion, said that at first the squamous lesions suggested psoriasis, and that the condition of the toes appeared to be broken-down chilblains. He therefore gave ichthyol ointment, which had cleared off the scales, leaving the reddened areas which were the sites of the previous squamous lesions. At first the appearances of the case were not strongly syphilitic, but now there could be no doubt about the diagnosis.

A Case for Diagnosis.

Dr. G. F. Harding also presented a young woman of thirty years who claimed that she had had a few lesions upon her face for the last seven years. These lesions were not permament but had appeared and disappeared, especially during the last six months.

At present the patient showed in the middle of the left cheek a depressed, irregular, hyperæmic scar. Above this, at the inner canthus of the eye, appeared a reddened, elastic tumor, the size of a small black bean. The nodule was neither hard nor soft, was oval in shape and had never exhibited any sensations. On the right side of the face there were pin-head to pin-point sized whitish tumors which were painful to the touch.

Dr. C. J. White considered the diagnosis of this case to be an extremely difficult one without the aid of the microscope. He would consider molluscum contagiosum and benign cystic epithelioma as the most plausible possibilities, but could not account for the depressed scar in connection with either of these diagnoses.

Dr. Howe would rather not consider the scar as a part of the present tumors, and would favor the diagnosis of molluscum contagiosum. The scar he would associate with a possible lupus erythematosus.

Dr. J. C. White thought that the lesion on the left lower eyelid looked like molluscum contagiosum, but would not hazard a diagnosis of the other changes present.

Dr. Harding, in summing up the case, said that he had entered the

case in the hospital record as benign cystic epithelioma, and added that by daylight the tumors were more suggestive of this rather rare disease. He had opened the lesion under the left eye, but had been unable to express any contents resembling the grains met with in molluscum contagiosum. He finally stated that he had noted that certain smaller tumors had disappeared spontaneously.

Dr. Howe said that in his opinion this fact would point distinctly toward the diagnosis of molluscum contagiosum.

A Case of Multiple, Small, Round-Cell Sarcoma.

Dr. J. C. White brought forward an Irishman, aged thirty-three, a painter by trade and a hard drinker for the past three years.

Six months ago the first lesion appeared between the right scapula and the vertebral column. One week later the second tumor was noticed over the spine of the left scapula and during the following two or three months the new growths slowly increased in number. Three months ago the patient began to feel tired, vomited, and felt "cold in the bones," and since then, during half of each week, he had similar sensations and has wanted to do nothing but "hug the stove." He has not been able to work more than one half of each day, and has lately given up work entirely. Has frequent night sweats.

Examination revealed the following conditions:—a few small nodules through the scalp.

Forehead. Dull red, irregular macules, without infiltration, which patient claims are evanescent but are not the forerunners of subsequent tumors.

Face. Irregularly shaped and sized nodules, circumscribed and pale in color.

Neck. Large tumor masses, soft to the touch, on each side of the neck, which follow down the track of the anterior cervical glands.

Chest and back. Small and large hyperæmic macules with a distinctly bluish tendency. Other lesions are infiltrated, forming irregularly circumscribed nodules. On left pectoral region appears a large tumor mass which seems rather adherent to the chest wall. Individual nodules are hard and firm, brown, red and ecchymotic in color and very scaly and dry on their tops.

Right forearm. Near elbow a large, round, hemispherical tumor, soft and elastic to the touch and the size of a small mandarin orange, brown-blue-red in color, scaly and dry on the surface and distinctly mobile.

Abdomen. Large flattened blue-red nodules, not very hard. Other smaller lesions less infiltrated and pinkish red in color.

Axillary glands. Large masses, rather soft and dull red.

Upper arms. Over right deltoid muscle, oval mass 1½ inches long, dull red and flattened on top.

Inguinal glands. Masses rather elastic with no great color changes.

Right testicle. Nodule at base of epididymis about one-quarter the size of the testicle.

Thighs and legs. Over calf of right leg large nodule, hard, chocolate-brown in color, with overlying skin almost ichthyotic to the look and feel. One small, round, red nodule over peroneus longus.

Morning temperature 99 degrees F. Pulse 100, easily compressible and of poor tension.

Blood examination (made by Dr. F. S. Burns) revealed marked leucocytosis and a differential count of:

Polynuclear leucocytes	69.6	per cent.
Small lymphocytes	12.3	"
Large lymphocytes	10.3	"
Transitional forms	7.8	"

A beginning nodule on the right chest near the nipple was excised, hardened in alcohol and examined by Dr. C. J. White.

Epidermis.

Stratum corneum is very thin and consists of two or three very fine lamellæ composed of finely elongated, non-nucleated cells.

Stratum lucidum and *stratum granulosum* are totally absent.

Stratum spinosum is perhaps thinned, but no other signs of pressure appear. The palisade layer is practically wanting and no pigment is visible. The more superficial rete cells receive the stain well, but in the upper layers the nuclei disappear and in the region normally occupied by granular cells the protoplasm appears cloudy and the cell walls are quite indistinct. A few cells are present in which the shrunken protoplasm leaves the nuclei apparently unsupported.

Corium. The papillary layer is well developed and shows vessels apparently normal. Healthy connective tissue cells and a moderate leucocytic extravasation complete the picture of this part of the skin.

At the level of the superficial, horizontal vessels the condition becomes abnormal. The vessels themselves are markedly visible and are surrounded by thick halos of leucocytes. The collagen everywhere consists of dense, tortuous fibers with here and there lymph lacunæ. Occasionally a larger lymph space appears filled with coagulated fibrin and detritus.

Deeper down in the corium the tumor proper develops. Surrounding the fibers of the musculi arrectores and everywhere invading the coils of the sweat glands are abundant masses of small, round or oval, vesicular nuclei with only a minimum amount of surrounding protoplasm. The nuclei have several nucleoli, many of which seem to show an affinity for eosin. The cells are not lymphocytes. The sweat glands retain their structure well and can be readily studied in the midst of the surrounding infiltrating tumor.

Hair, sebaceous glands and efferent sweat tubes do not appear in the sections.

Diagnosis, small round celled sarcoma.

In the ensuing discussion Dr. Post said that this case was an example of the disease which we so often see in connection with misplaced pigment and scars, *i. e.*, mycosis fungoides. He thought that the duration was very short and the glandular involvement unusual, but would nevertheless call the case mycosis fungoides.

Dr. Howe thought the disease very suggestive of mycosis, although the man had not experienced any of the usual pre-mycotic symptoms. He would also consider the diagnosis of sarcoma as a very proper one.

Dr. C. J. White thought that there were two facts very much against the diagnosis of mycosis fungoides, viz.: the very rapid development of the disease and the absolute absence of the premonitory symptoms. From his microscopical examination he could state positively, he felt, that the disease was not mycosis fungoides on account of the character, distribution and inter-relation of the infiltrating cells. He would call the disease a multiple, small, round-cell sarcoma.

Dr. J. C. White said that from the gross appearance of some of the larger tumors one might think that the disease was mycosis fungoides, but he did not believe it was common for the early lesions of that affection to assume the hæmorrhagic type present in this case. On the other hand he was well aware that rapidly developing cases of mycosis fungoides had been recorded, but he considered this example altogether too rapid to be thought of as such an instance, and had made the diagnosis of multiple sarcoma when he first saw the case.

[It is interesting to record that after one week's administration of arsenic and the exposure to the X-rays of the adherent mass on the chest, that these nodules have shrunken in size, have become of a lighter hue, and are quite mobile; but the patient has proved very susceptible to the ill effects of arsenic, and feels generally weaker.]

A Case of Impetigo Contagiosa Circinata.

Dr. C. J. White presented a young man of thirty years who had upon his face a striking ringed eruption. The disease had existed about a week, and the patient could give no decided clew to its origin. He shaved himself, he slept and roomed alone, and he knew nobody who had had a similar disease; but he confessed that he had borrowed a razor from a friend who was a barber and also that he had bought a second-hand sweater from this same man.

Upon the man's face there were perhaps six round or oval lesions, the largest of which was more than an inch in diameter. In the center of these lesions the skin was not raised but was reddened and slightly rough. The edges were distinctly raised and consisted of dirty yellow, moist crusts forming a ridge perhaps ⅛ inch in width. The patient said

that the spots had developed from a central point, and had quickly grown by peripheral extension. On each wrist there was a moist, oozing crusting lesion discolored by blood and about ½ inch in diameter. There were no subjective symptoms.

Dr. Howe considered this a case of tinea circinata, but thought it unusual to see such marked ring arrangement in the bearded face.

Dr. J. C. White thought the crusts at the periphery and the scaliness of the center to be suggestive of impetigo rather than of tinea.

Dr. Post would regard the case as one of tinea tricophytina.

Dr. Harding made the diagnosis of impetigo contagiosa and would hold the borrowed sweater as the source of infection.

In closing the discussion, Dr. C. J. White said that this case seemed to him to be surely one of impetigo contagiosa—the adult type of this disease, the so-called impetigo circinata. He would consider it very unusual for a case of tinea tricophytina (outside of the megalosporon ectothrix) to reach the size of these lesions in so short a time as one week. On the contrary, the superficial character of the lesions, the very moist type of the eruption, the abundant oozing of serum and consequent crusting were all characteristic of impetigo contagiosa circinata, which is becoming not at all uncommon at the Massachusetts General Hospital.

A Case for Diagnosis.

Dr. G. F. Harding showed a negro boy thirteen years of age who stated that his present skin disease had begun two years ago. At the age of six years he had pneumonia and typhoid fever, and has never been strong but he never had a cough and has not lost flesh. The mother has had six children, one of whom died of some spinal disease and had an abscess on the face.

Over the left occipital region there was a large sunken, reddened scar totally devoid of hair. Covering the right cheek appeared a large lesion the central part of which was atrophied, erythematous and crusting. The periphery consisted of an elevated, irregular ridge, soft, red, covered with a crust and surrounded by a pinkish halo. There was some ectropion of the lower eyelid. On the right wrist appeared a broken down tubercle, soft, raised, with an uneven, pustular and crusting surface. This lesion began "as a wart" about eight months previously. There was a generalized cervical adenitis.

Over the deltoid muscles and extending down the exterior surfaces of the arms there was a marked follicular keratosis while on the knees and over the legs there was a distinctly xerodermatous condition.

Dr. J. C. White stated that the case seemed to be one of tuberculosis of the skin. The dry, scaly condition of the skin and the sluggish state of the follicles denoted a low state of nutrition, but he would not connect the two processes.

Dr. C. J. White agreed with the previous speaker and said that it

was not uncommon in negroes to meet with cutaneous tuberculosis and a dry scaling skin.

Dr. McCollom made the diagnosis of tuberculosis, and in reference to the frequent dryness of negroes' skins he said that after scarlet fever in this race, the skin would look as though it had been whitewashed.

In conclusion, Dr. Harding stated that the involvement of the follicles on the arms had suggested to him the presence of a possible lichen scrofulosorum.

A Case for Diagnosis.

Dr. J. H. McMollom spoke of a most unusual case which some of the members had seen in the diphtheria wards of the Boston City Hospital.

The patient, a boy of six, became ill on December 12th. He complained of a sore throat, malaria, and headache. Two days later the boy said that he itched, and there appeared simultaneously on the extremities an eruption consisting of a number of discrete, reddish spots which turned black in two days. The mother said that at first the lesions looked like "hives." The sore throat gradually increased in severity, and on December 17th the cough became "croupy." Signs of laryngeal stenosis increased in severity, and at the time of admission were very marked, requiring immediate intubation.

On inspection the following lesions were observed: The tongue presented five or six elevated patches which apparently had been vesicles but were now covered by necrotic epithelium. On the left ear there were two ringed, vesicular lesions. Over the exterior surface of the arms, over the small of the back and the sacrum and over the back of the thighs there were discrete, absolutely round, button-like lesions, remarkably symmetrical, varying in size from a pea to a ten cent piece. The tops were flat, hard, black, and were surrounded by a vesicular ring, 1-32 inch in diameter, and outside of all an erythematous halo. These unusual lesions had shown no increase in size since their appearance, and consequently no tendency toward coalescence. The circular lesions could be picked up between the fingers, and felt like hard rings to the touch.

On December 23rd, the patient had a well-marked profuse urticaria over the whole cutaneous surface. The original cutaneous lesions had become more depressed with crust formation. The crusts were separating, leaving a hollowed-out ulcer with clean-cut edges, and showing a tendency to bleed.

On December 25th the urticaria had nearly disappeared and the lingual lesions had gone, leaving ulceration behind them.

On December 26th the patient died. During his stay in the hospital he had received 20,000 units of antitoxin.

A Case of Orthoform Dermatitis.

Dr. C. J. White described a case of orthoform dermatitis which he had hoped to present at the meeting but the man had failed to appear.

The patient was twenty-three years old, and a sausage maker by trade. His general health was poor and his symptoms suggested trichinosis, but total absence of eosinophilia forced one in all probability to abandon this diagnosis. He came to the hospital on account of a small ulcer below the inner malleolus of the left leg. On October 21st the patient was given a wash of tartrate of iron and potash and boracic acid ointment. On October 31st one-half drachm of orthoform was added to an ounce of the previous ointment on account of the painful nature of the ulcer. Three weeks later the man came to the clinic, showing an increased redness about the ulcer but no mischief from the applications was suspected, and he was asked to continue his treatment. On December 2nd, that is after about four weeks' use of orthoform, the ulcer was surrounded by a greenish-yellow slough while the edges were soft and white. Beyond the slough was an angry red halo, two inches wide, and outside of all clusters of grouped vesicles which below had coalesced and formed a large pocket of yellow serum which, on examination, proved to contain 76 per cent. of eosinophiles.

On removal of the orthoform the inflammatory symptoms disappeared, but the restoration to comparatively healthy tissue was perceptibly slow.

Charles J. White, Secretary.

BOSTON DERMATOLOGICAL CLUB.

The regular January meeting was held on the twenty-seventh day of the month

Dr. J. S. Howe in the chair.

Dr. J. C. White presented a case of **Cheiro-pompholix** in a medical student, aged twenty-seven years.

At the age of ten, the patient had a vesicular eruption between the fingers of the left hand. The attack appeared in summer, lasted about a week and was thought to be due to ivy-poisoning. For four successive summers the disease recurred, always appearing on the sides of the fingers and subsiding at the end of a week. After an interim of four years, the disease began to recur, appearing as vesicles on the backs of the hands and on the sides of the fingers. At this time the vesicles began to appear in groups and showed a tendency toward coalescence. Similar attacks have occurred at varying intervals up to one year ago and usually

have been at their worst at the beginning of each summer. During one attack a bulla formed on the thenar eminence and was soon surrounded by a group of vesicles. Occasionally a few lesions have appeared on the right hand and have shown the same tendency toward coalescence that has been noted on the left. The patient has also noticed a few vesicles on the toes of the right foot.

The present attack began about ten days ago as small vesicles principally on the back of the hand on the ulnar side. These vesicles quickly became confluent, forming large bullae and other vesicles began to appear on the sides of the fingers. In two or three days the bullæ ruptured, producing large denuded areas while other new grouped vesicular lesions appeared about these superficial ulcers as well as on the toes, fingers and palms of the hands.

There is no history of exposure to ivy or to other chemical irritants and the lesions do not itch. The patient is in the best of health and appears well and is able to pursue his medical studies.

In the discussion Dr. Bowen said that he had seen the patient hurriedly and by artificial light some days before when the eruption had first appeared. At that time the eruption had every appearance of an artificial dermatitis or of an eczema following such a condition and consisted of small, closely grouped vesicles. Now it had developed the feature of larger, confluent vesicles and bullæ such as is not usually seen in an acute dermatitis of the ordinary types. Apart from this feature, it did not differ from the recurrent eruptions which we so commonly see on a part that has previously been the seat of an acute dermatitis from some external irritant. Another feature was the fact that the palms were very slightly affected.

Dr. Harding stated that the appearance of the eruption would suggest a dermatitis venenata; but, taking into consideration the history, he would regard the case as one of pompholix.

Dr. C. J. White considered the disease to be cheiro-pompholix. The vesicles appear between the fingers, and on the palms and on the backs of the hands and between the toes. They are small at first, do not itch, and gradually become larger, forming great bullæ. The absence of exposure to any irritants and the repeated attacks of the eruption suggested pompholix rather than dermatitis venenata.

Dr. Howe remembered seeing two cases of cheiro-pompholix at the clinic of Dr. Colcott Fox, in London, and said that this patient's disease resembled the London examples as closely as anything he had ever seen in America. There was one difference, however, and that was the marked preference the vesicles in this case evinced for the backs of the hands. In the speaker's opinion, the case was one of cheiro-pompholix.

Dr. J. C. White regretted that the members could not have seen the case during the previous week, when there were large areas of bullæ. He thought that there had never been any positive evidence that the origi-

nal attack had been caused by poison-ivy. He believed that if there was such a disease as cheiro-pompholix that the present case was a good example of that affection, and that he had never seen a dermatitis venenata with such exaggerated lesions as in the case just presented.

Dr. C. J. White presented a case of **Lymphangioma circumscriptum.**

The patient, Annie Q., was born in 1889 without any signs of the present disease. In 1891 a small lesion resembling "a mosquito bite" appeared on the forearm. Six months later larger lesions appeared on the upper arm, near the bend of the elbow, which a local physician diagnosticated as "fatty tumors." These masses grew very quickly and reached their full size in about six months. In 1894 the patient was brought to the Massachusetts General Hospital and the tumors were removed by Dr. H. A. A. Beech. The house records state that there were two bunches on the arm the size of pullets' eggs, which were extirpated and given to Dr. W. F. Whitney for microscopical examination. Dr. Whitney reported that the tumors were "masses of fat tissue traversed by streaks of connective tissue in which were numerous smooth-walled spaces in relation with lymph vessels, i. e., diffuse lymphangiectasis."

The subsequent history is that in three years the growths had returned and that frequently the surface of the tumors becomes eczematous, and in winter, when the child has a cold, "she feels feverish and sick all over and the swellings become very painful to the touch while the whole arm swells and grows red." Between these attacks the masses decrease in size and the little surrounding lesions (vide infra) disappear entirely.

Present Condition. In the middle third of the upper arm appears a hypertrophied scar, 2-3 inches long, surrounded by keloidal stitch-marks. Extending inward and downward from the lower part of the scar there is a mass two inches long and an inch broad, raised ½ to ¾ inch above the surface, firm, elastic and somewhat compressible. The lower surface is covered with thick, yellow, adherent crusts. The upper third has large, flattened, dull-red nodules resembling lupus vulgaris.

Below the bend of the elbow on the radial side extending one-half the length of the forearm are scattered, clustered groups of translucent, glistening vesicles varying in size from a pin-point to a pea. The smaller lesions have central depressions, the larger ones appear darker at their summits. The lesions in this case are whiter in color than others which we have observed at our clinic.

In the middle of the forearm is a thin linear hypertrophied scar three inches in length—the seat of other tumors removed at the operation. There has been no return of the disease at this point.

After a few days' application of mild, antiseptic washes and ointments the yellow crusts disappeared from the tumor disclosing a red,

PLATE XXI.—To Illustrate Boston Dermatological Club Reports.



Fig. 1. Dr. J. C. White's case of cheiro-pompholix.



Fig. 2. Dr. C. J. White's case of lymphangioma-circumscriptum.

PLATE XXII.—To Illustrate Boston Dermatological Club Reports.



Fig. 3. Dr. C. J. White's case of lymphangioma-circumscriptum.



Fig. 4. Dr. Howe's case of three primary syphilitic lesions.

uneven, brilliant surface, which, on near inspection, appeared as though composed of many minute cysts.

For microscopical examination a small group of vesicles was removed from the lower arm, hardened in alcohol, imbedded and cut in paraffin and stained in many ways. To gain a clearer idea of the pathological process it seems wiser to divide the description of the sections into two parts: first, the tissue adjacent to the tumor, and second, the tumor itself.

1. THE ADJACENT TISSUE.

Epidermis. The horny layer is perhaps hypertrophied, but otherwise normal. This overgrowth increases as the tumor is neared. The stratum lucidum does not appear. The stratum granulosum exists throughout the sections as a single layer of cells containing a rather diminished amount of kerato-hyalin. The rete Malpighii is everywhere hyperplastic with a distinct increase in the size of the interpapillary pegs. In places the palisade layer is well marked, while in others it is absent. The polygonal cells have preserved their spines, but to a great extent their protoplasm has shrunken, leaving their nuclei floating in an apparently empty space. This vacuolation is one of the chief pathological conditions throughout the sections. The shrinking process is not limited to the protoplasm alone, but affects the nuclei as well, leaving them smaller, more compact and so darkly stained that no nucleoli appear.

Corium. The papillæ are large for this part of the body and contain capillaries which are all to a greater or lesser extent dilated without any marked cellular extravasation. The superficial horizontal vessels are distinctly enlarged; many of them to a marked degree, and contain red and white corpuscles. Some of them are lined with swollen endothelial cells. Deeper down in the corium the vessels appear emphatically dilated and are surrounded by masses of lymphocytes and a few mast cells. The collagen seems rather œdematous bearing but few nuclei and receiving the stain faintly while the individual bundles are somewhat separated. About many of these deeper plexuses are large open lymph spaces, some quite empty, others containing eosinophilic detritus. An occasional sweat duct appears through the sections and is usually accompanied by a dilated ascending vessel, the whole surrounded by lymph spaces.

2. THE TUMOR.

The new growth, if this is a proper term to use, consists of three large, irregularly oval spaces, separated and completely surrounded by spinous cells—except in one instance where the lower boundary is formed

by the corium. In other words these "vesicles" are entirely within the rete Malpighii. The spaces are nearly filled with a delicate tracery of fibrin free from leucocytes. The superficial wall consists of a thin layer of epidermis consisting of shreds of the horny layer, an occasional granular cell and three layers of rete cells with elongated, flattened, homogeneously-stained nuclei. The septa between the separate chambers are composed of three to six layers of rete cells more normal than those of the outer walls, but containing the vacuolated cells described in the epidermis adjacent to the tumor. The floor of two of the chambers consists of the lower layers of the rete composed of closely packed spinous cells with somewhat vesicular nuclei. It seems probable that the floor of the third "vesicle" was also formed by rete cells which have been swept away during the preparation of the specimen. In places these floors show ballooning degeneration of the cells in their uppermost layers suggesting, perhaps, the natural history of the formation of these "vesicles."

Corium. Below the "vesicles" the papillæ are naturally absent and large dilated lymph spaces and enlarged capillaries, filled with red corpuscles and surrounded by lymphocytes, appear. The deeper layers of collagen contain many enlarged lymph spaces and well formed lymph lacunæ. Cellular infiltration is not markedly present and consists of lymphocytes and an occasional mast cell. The elastic tissue is everywhere normal in amount and in the structure of its fibrillæ.

Dr. Harding though it difficult to believe that the operation which was performed in 1894 was for the same process, since, judging from the scar, a large mass had been removed. He would call the present condition *lymphangioma circumscriptum.*

Dr. C. J. White concurred in this diagnosis. Dr. C. J. White considered the case to be one of *lymphangioma circumscriptum* on a deep base, such as has been especially described in Europe. He wished to emphasize the unusual feature of the epidermal location of the principal three "vesicles"—a seat which he had never observed before in histological sections.

Dr. Howe presented A Case for Diagnosis.—A child of two and one-half years with puckered scars at each angle of the mouth and scar-tissue involving half of the lower lip. The original trouble began seven months ago at the angle of the lips. Later a small pustule formed on the lower lip and gradually increased in size and finally healed.

Dr. Post and Dr. McCollom discussed the possibilities of syphilis and of tuberculosis, but would not commit themselves to diagnosis.

Dr. White wished to add to the above possibilities that of a traumatic or a bacterial origin.

Dr. C. J. White thought that there was no evidence in the child's history pointing toward syphilis. He would rather incline toward a septic and destructive process in a previously debilitated child. Dr. C. J.

White asked Dr. McCollom if this could possibly have been a diphtheritic process. Dr. McCollom replied that such deep destruction would be impossible in diphtheria.

In closing the discussion Dr. Howe said that minute inquiry revealed nothing pointing toward syphilis in this case. There had been some enlarged glands, but nothing more of significance. When the child was first seen by him there were two ulcers on the lower lip between the lip and the teeth, which disappeared without any treatment. Dr. Howe had hoped that the members would be able to aid him in this diagnosis.

Dr. Howe next brought forward a young woman (vide photograph) with **two primary lesions of syphilis** on the upper lip and one on the lower lip. The patient presented also a maculo-pustular eruption over the body.

The seven members present all concurred in the diagnosis.

A Case for Diagnosis.

Dr. J. C. White presented a Russian Jewess, æt. 17, who had consulted him on account of several large lesions which had appeared within two or three weeks. When first seen there were three deep, firm, painless, round, dome-shaped, white tubercles, one inch in diameter on the anterior surface of the thighs. A similar, smalled nodule soon formed on the upper lip near the corner of the nouth. Over the whole abdomen and scattered over the lower back and buttocks were deep, white, irregularly-rounded and polycyclic scars. The history of these scars is very limited and unsatisfactory. The mother states that at the age of four the patient had for the space of six months open sores, which at no time resembled the large tubercules now present on the thighs. The patient is one of six children and the mother affirms that another child had a similar process. There is a history of one miscarriage.

During the two weeks that the patient had been under Dr. White's observation these tubercules had all softened and several of them had suppurated and discharged purulent matter.

In the ensuing discussion the members confessed themselves at a loss for a diagnosis. The possibilities of scrofuloderma, erythema induratum, syphilitic gummata and dermatitis medicamentosa were all advanced only to be ruled out. To an inquiry of Dr. J. C. White, Dr. Post replied that some of the cicatricial lesions might be syphilitic.

Dr. C. J. White exhibited a man thirty-six years of age, who had suffered for ten years from fistula in ano with a subsequent extension of the tubercular process upon the right buttock. For five years the man had had a gradually spreading **verrucous tuberculosis of the skin**, which had proved absolutely intractable to treatment. The patient had

been exposed to the X-rays (by Dr. F. S. Burns, the assistant in the skin clinic at the Massachusetts General Hospital) thirty-four times with an average exposure of five minutes with the result that the disease had totally disappeared leaving a soft pinkish-white scar showing no signs of recurrence of the disease at the end of six months. Dr. C. J. White presented with this patient a photograph clearly showing the extent of the previous process and in the subsequent criticism Dr. Post said that as a surgeon he wished to express his admiration of the success of the X-ray treatment in a disease which, until this new therapeutic agent had appeared, had been one of the bugbears of surgical practice.

Dr. C. J. White also presented a case of **Lichen Planus Annularis** in an Irishman of fifty-nine years. The disease began as a small papule which itched so intensely that the man had soon scratched the top off, leaving a bleeding surface. The man described the original lesion as a flattened, irregular, dull-red papule, which grew by peripheral extension. Other papules appeared and underwent the same process until now at the end of eighteen months there is a surface on the lower leg two by three inches covered with six or eight raised circles running into each other forming polycyclic outlines and borders with sunken centers, each circle being about one-half inch in diameter. The circular rims are dull-red in color, with characteristic fine gray lines on top, while the lower-lying centers are bluish-white and softer to the touch. Just below this area there is a cluster of lesions absolutely typical of lichen planus. These two groups of lesions are the only ones upon the whole body and apparently there has been no involvement of the skin elsewhere.

In speaking of the case Dr. C. J. White said that he believed Radcliff-Crocker considered that this extremely rare annular form of lichen planus was formed by the conglomeration of many papules thus resulting in a circle, but this case certainly proved that this method of growth was not the only one and that the circles could be formed by the peripheral extension of one papule. Dr. White regretted that the patient had absolutely refused his permission for a biopsie.

A Case for Diagnosis.

Dr. Howe presented the last case of the evening—a Swede, thirty-eight years of age. On the right palm were four or five circular, slightly indurated, scaling areas about the size of a ten-cent piece. There were several lesions of the same size on the right wrist. In the flexure of the right elbow a reddened area about the size of a silver quarter-dollar covered with greyish scales and there were similar areas on the shoulder and on the right thigh opposite the scrotum. Scattered over the trunk and arms appeared many lesions, rounded or oval in shape, varying in size from a ten-cent piece to a half dollar, some rosy-red, but most of them having only pigment stains varying from light to darkish brown and

many of them presenting evidences of scaling. The patient, when first seen, was taking a liquid medicine and had had hypodermic injections of mercury. The patient admitted having had a small sore on the penis.

In discussing the case Dr. J. C. White suggested the possibilities of syphilis, pityriasis rosea, Brocq's *érythrodérmie pityriasique en plaques disseminées* and psoriasis, but on the whole was inclined to call the disease syphilis.

Dr. McCollom concurred in this diagnosis as far as the lesions on the palms of the hands were concerned, but did not feel so positive about the appearances on the abdomen.

Dr. Harding thought that the man had syphilis, but was inclined to regard the abdominal lesions as evidences of iodism. He had had a patient on whom very similar macules would appear after the slightest medication with iodide of potash.

Dr. Bowen said that he assumed without question that the man had syphilis. The interesting feature of the case was the appearance of the erythematous patches which in some places had taken on an annular form. They suggested very strongly several cases of persistent erythema occurring in syphilitics that he had seen in consultation with Dr. Post, and which had a very strong resemblance with the *érythrodérmie pityriasique* of Brocq. This resemblance was so marked as to suggest the question of a possible relationship of *érythrodérmie pityriasique* to syphilis. In this case the annular character of some of the lesions was not inconsistent with a recurrent roseola.

Dr. C. J. White wished to call the abdominal lesions an example of late, recurrent roseola.

Dr. Post expressed great interest in the case and regretted that he was obliged to study it by artificial light. He stated that in his belief the man had syphilis from the evidences on the man's palms, and that the erythematous lesions on the abdomen belonged with the cases which Fournier designates as recurrent roseola. He did not believe that these macules were due to iodide of potash.

Dr. Howe, in closing the discussion, said that the palmar lesions had changed a good deal during the week in which he had observed the case. When first seen by him the papules were very characteristic of syphilis. At his first examination many of the abdominal lesions were red, others pigmented and some of them were distinctly wheal-like so that he had thought of a possible leprosy, but he had abandoned that idea and was inclined to regard the case as one of syphilis.

Charles J. White, Secretary.

ABSTRACTS.

A Contribution to Dermatitis Pyæmica. L. Merk. (Arch. f. Derm. u. Syph., 63, 1902, p. 253.)

A patient suffering from meningo-encephalitis died with an eruption consisting of vesicles and acne-like pustules, scattered over the body and erythematous spots with central vesicles. In some skin sections small abscesses between the epidermis and corium were found, and in their center large bunches of cocci.

Although the writer neither made cultures, nor did he examine the blood, he considers the abscesses produced by blood infection, basing this statement upon the findings of other writers, who found cocci in the blood in similar cases. —Lapowski.

The Theory of the Curability of Lupus by Light. Frank Nagelschmidt (Prof. Lesser's Clinic). (Arch. f. Derm. u. Syph., 63, 1902, p. 335.)

The reaction of the tissue and the bacteriological action of the light have been regarded as the main factors in producing the curative results of light. The bacteriological action has been regarded as secondary, being the outcome of the changed conditions in the tissues. The writer's experiments seem to point to a different conclusion, namely, that the light does kill the bacilli, and when the tissues are no longer irritated by the bacilli, absorption of the morbid products is possible. With all due precautions he rubbed into the shaved, scarified backs of guinea-pigs living cultures of tubercle bacilli in two symmetrical places. After the produced wounds were healed, there were noticed local changes in the skin, and portions on one side were excised after having been exposed to the action of light for one hour, while portions on the other symmetrical side of the back were excised, without having been previously exposed to light. The excised portions were inoculated into two series of guinea-pigs; one series was inoculated with the tissues upon which the light acted for an hour, the other series was inoculated with the tissues not acted upon by light. Eight guinea-pigs out of nine of the first series remained free from tuberculosis, while all of the second series were affected with tuberculosis. The ninth guinea-pig of the first series showed tuberculosis of both testes, bladder and kidneys.—Lapowski.

What Changes in the Skin Can Be Produced by Mechanical Irritation of the Skin? Ludwig Török. (Arch. f. Derm. u. Syph., 63, 1902, p. 27.) The Question of Eczema. Can we produce an eczema by mechanical agencies? Prof. V. Ròna. (Arch. f. Derm. u. Syph., 63. 1902, p. 39.)
Is There a Reflex eczema? By I. Csillag (Ròna's Clinic.) (Arch. f. Derm. u. Syph., 63, 1902, p. 213.)

The opponents of the parasitic origin of eczema usually bring forward the fact, that the absence of bacteria in the primary lesions of eczema is a sufficient proof of the fallacy of this view. But after Bockhart's, Bender's, and Gerlach's proved statements, that the toxins of staphylococci can produce vesicles free of bacteria, it remained to be shown whether mechanical insults can produce the vesicular type of eczema with its weeping surface. Török, from his experiments, draws the conclusion that upon a normal skin the mechanical effects of scratching consist of miliary elevations, or large flat or lichenified spots, situated in the papillary layer.

Upon a more sensitive skin, the mechanical irritation will not evoke a serious exudation to such an extent as to form vesicles and lead to protracted weeping of the skin. The degree of weeping in such circumstances does not alone depend upon the degree of the mechanical irritation, but more upon the irritability and sensitiveness of the vessels. Róna undertook a series of experiments in order to prove (1) that changes are produced by scratching (a) upon a healthy, not itching skin, (b) upon healthy not itching places of skin of "eczematous," *i. e.,* predisposed individuals, (c) upon a healthy but artificially produced pruriginous skin and (d) upon a healthy, but artificially made pruriginous skin of "eczematous," *i. e.,* predisposed individuals. He also investigated all such changes of the skin, which are produced by scratching during the course of pruriginous dermatoses and of various forms of pruritus of the skin.

From his experimentations and observations he draws the conclusion that the mechanical irritation and especially scratching call forth even in predisposed persons only excoriations, passing hyperæmia and slight œdema. Only after prolonged action and only in persons especially inclined, the mechanical irritation—scratching—produces circumscribed, more or less diffused, hypertrophy of the epithelium and of the papillary layer (lichenization). Under no conditions can scratching by itself provoke the disease described by writers as vesicular or weeping eczema.

It is usually accepted that eczema spreads either *per continuitatem* or appears in locations removed from the primary affected focus, the so-called reflex eczema. Csillag tries to undermine the conception of reflex eczema by questioning the various arguments, which are usually adduced as proofs of the participation of the nerves in spreading the eczema, and shows that the points brought forward to prove the theory of reflex action can be as well used to disprove the theory. Then he undertook experimental work—by means of various irritants (arnica) applied to the skin—in order to show that experimentally eczema in such cases cannot be propagated by reflex influence, that if we take care to limit the action of the irritant to a certain spot, only that spot will be affected by eczema—and not remote places.

Consequently when we clinically see cases where eczema develops on remote places, we should rather ascribe its origin to the accidental action of the irritant and not invoke a theory which has only a semblance of probability.—Lapowski.

Sarcoma Idiopathicum Multiplex Pigmentosum et Lymphangiectodes. A Particular Form of So-called Sarcomatosis cutis. Robert Bernhardt (Elsenberg's Clinic). (Arch. f. Derm. u. Syph., 63, 1902, p. 239.)

Both the clinical and microscopic aspects of his cases warranted the writer's giving a special name to the affection observed by him.

A man of twenty-six years was affected when twenty years old with erysipelas of the left lower leg. After recovery he noticed that the left extremity was swollen and covered here and there with red spots. When he entered the hospital only the lower left extremity, especially the foot, was affected.

When internal remedies failed to improve the condition an amputation was performed.

The clinical differences between this case and the cases described by Kaposi as typical consist (1) in the involvement of only one extremity although the case

lasted six years; (2) the sarcoma did not develop in the form of tubercles, tumors, but that it grew in the skin itself, thus forming a diffuse sarcomatous degeneration of the skin, not raised above the surface. The special feature of this case was the colossal enlargement of the lymphatic vessels in all affected foci, so that a diagnosis of "lymphangioma" suggested itself. The author leaves the question open whether the erysipelas did not open the way for the entrance of the unknown agent of the disease and by altering the lymph vessels produce a favorable soil for the development of the sarcoma.—Lapowski.

The Bacillus of Lisle-Jullien in Syphilis. L. B. Sovinski. (Russ. Journ. of Cutan. and Vener. Dis., Vol. IV, 1902, p. 33.)
Bacteriological Investigation of the Blood of Syphilitic Patients. L. B. Sovinski. (Russ. Journ. of Cutan. and Vener. Dis., Vol. IV, 1902, p. 592.)

Lisle and Jullien reported the presence of a round, granulated, rod-like bacterium in the venous blood of syphilitic patients and in the plasma fluid of a syphilitic patient obtained by means of a Spanish fly plaster applied to the skin. They accepted this bacterium as the cause of syphilis.

Sovinski undertook to verify the statements of the foregoing writers, but before examining the plasmic fluid of syphilitic patients obtained by means of a Spanish fly plaster he examined the plaster itself before its application to the skin, and found in the plaster microscopically a bacterium which corresponds in every particular with the bacterium described by Lisle and Jullien as the cause of syphilis. Furthermore, Sovinski examined bacteriologically the venous blood of untreated patients suffering from syphilis in its various stages, during the period of the hard chancre, and during the period of the early eruption, with negative results. The obtained blood was examined bacteriologically upon solid and liquid nutritive media and in Nocard collodium capsules and it proved sterile. This prompts him to express an opinion that syphilis may not be a bacterial disease, and consequently all our endeavors to find a bacterium will prove fruitless.—Lapowski.

Syphilis Nodosa ("Erythema Nodosum Syphiliticum") and Syphilitic Phlebitis Max Marcuse (Jadassohn's Clinic). (Arch. f. Derm. u. Syph., 63, 1902, p. 1.)

We meet in some syphilitic cases efflorescences which are clinically allied to and occur on locations characteristic of erythema nodosum idiopathicum. Such cases have been regarded as specific exanthemata and described as *erythema nodosum syphiliticum* by French writers.

Marcuse brings forward three cases of such a character and from the critical study of the clinical and histological features of these cases he concludes, that the aforesaid form of syphilis nodosa usually occurs in the first year after infection, often combined with other skin manifestations, being either entirely absorbed, or softens and ulcerates. They sometimes react to specific treatment. The anatomo-pathological investigations of Philippson and of himself show that the starting point of these foci lies in changes in the subcutaneous veins. Both clinically and anatomically there are analogies between these forms and certain nodular "tuberculides." These forms occupy the intermediary position between secondary and tertiary manifestations of syphilis.—Lapowski.

Syphiloma Hypertrophicum Diffusum Faciei (Elephantiasis Luetica) Starting from the Nose. Gottfried Trautmann. (Arch. f. Derm. u. Syph. 63, 1902, p. 97.)

The manifestations of tertiary syphilis often occur in the form of an elephantiasis. This form may be produced either by the products of syphilis, giving rise to a form clinically known as indurative œdema, or it may be the outcome of syphilis itself as a diffuse syphilitic infiltration. When the infiltration takes place in the region of the nose, the syphilis is often overlooked and rhynophyma accepted, especially when the patient denies infection and no other direct syphilitic manifestations are present. Such a case came under the observation of Trautmann. The patient, suffering from the local affection for thirteen years, has been regarded by competent physicians as a case of rhynophyma. The consistency of the affected tissues, the hard separate nodules without any particular development of blood vessels, the involvement in the process of the upper lip in form of sores and rhagades, spoke against rhynophyma and for syphilis. Iodide of potash taken internally procured a remarkable change and confirmed the diagnosis.—Lapowski.

A Case of Diffuse Gangrene After Intramuscular Injection of Hydrargyrum Sozojodolicum. Hermann Neumann and E. Bendig. (Arch. f. Derm. u. Syph., 63, 1902, p. 267.)

While the number of published cases where undesirable results followed the intramuscular injections of insoluble mercurial combinations is quite large, there are comparatively very few cases in which the intramuscular injection of a soluble preparation of mercury has produced a gangrene of the skin, especially of nervous origin. The authors' case presents such an occurrence. They treated a patient with skin manifestations of syphilis with intramuscular injections of sozojodol of mercury. Except for a subacute parenchymatous nephritis ascribed to overwork in a tropical region the patient did not present any anomalies. During the third intramuscular injection, the needle penetrated the skin and underlying tissue slightly above the region of the left trochanter major, without any pain, but during the injection of the first drops the patient emitted a painful shriek, bent the upper portion of his body and the left knee to the left, turned pale, pulse could hardly be felt, but did not exhibit any disturbance in respiration. Not a drop of blood followed the removal of the needle. The pain and swelling of the left buttock gradually increased, the temperature rose in some days to 40 degrees C., while no signs of fluctuation could be noticed. The swollen buttock was cut open by three incisions, no pus was found in the tissues. The wound healed by sloughing and after three months it cicatrized. The writers ascribed the cause to a nerve injury.—Lapowski.

How Can We Contend with the Social Danger Which Is Caused by a Syphilitic Pregnancy? Prof. Edward Welander. (Arch. f. Derm. u. Syph., 63, 1902, p. 293.)

The writer considers chiefly the social condition in Sweden, where there are free hospitals and free treatment for all venereal and syphilitic patients. He advises an intermittent treatment for both mother and child even if the latter is born free from syphilis from a syphilitic mother. He endeavors to limit the spreading of syphilis by wet nurses, by means of certificates signed by them that

they are free from syphilis—in cases of latent syphilis—and punish them for their false statement if they transfer the disease.—Lapowski.

Bacteriological Researches in Secondary Syphilis. Dott. G. Pini. (Giornale Italiano della malattie veneree e della pelle. Vol. XLIII—1902—Fascicolo VI.)

Dr. G. Pini, clinical assistant and "libero docente" in the Skin and Syphilis Clinic of the Royal University at Bologna (Italy) reports the results of his investigations in secondary syphilis along the lines followed by Drs. Justin De Lisle and Louis Jullien and reported to the Academy of Paris in 1901.

Dr. Pini states that he took the blood of syphilitics at the beginning of the secondary stage, at the appearance of the first syphiloderm and before any treatment had been instituted. The technique followed was that of the French authors, the blood being taken from the cephalic vein and the plasma separated in some instances by mechanical and in others by chemical means. Attempt was also made to use the fluid from blisters produced by cantharides, but was abandoned.

Plasma separated mechanically and by chemical means gave similar results. Plasma examined in suspended drops showed a few distinct bacillary forms, about 5 or 6 μ long, endowed with Brownonian movement, and which while moving actively made but slow progress across the field of the microscope. The investigator was unable to distinguish chains of bacilli reported by Drs. De Lisle and Jullien, but rather bacilli tending in the same general direction and in their movement rapidly departing from and assuming parallel positions. After about two hours the Brownonian movement abated and ceased. After standing and drying the observer was unable to differentiate the bacilli from other deposits from the plasma.

The culture media used were simple bouillon and ascitic fluid. Other media gave unsatisfactory results. Plasma was taken from the blood of seven individuals in the manner above indicated. Three of these gave the results hereafter to be described, and a fourth gave a variety of bacillus so different from that described by De Lisle and Jullien and from that observed in the other cases that it was regarded as the result of contamination and was discarded. This form developed in two tubes only. Three of the cases gave no cultures at all.

From the three cultures with positive results a bacilliform micro-organism, about 5 or 6 μ long, was obtained, identical as to morphology and of the same characteristics as that noted in the plasma itself.

In bouillon it acted differently from that reported by De Lisle and Jullien, producing a very slight almost imperceptible turbidity, not forming a film, but after about 48 hours precipitating and showing a whitish powder like sediment. In ascitic fluid its development was slower and the sediment scantier.

Hypodermic, peritoneal and venous inoculations of cultures of the organism at the third, fifth and seventh day of its development were made in guinea-pigs, rabbits and a dog. All the results were negative. None of the guinea-pigs died, nor was there the emaciation noted by the French authors with their bacillus; neither was there any falling out of the hair nor induration at the point of inoculation when the guinea-pigs were infected hypodermically. To quote, Dr. Pini goes on to say, "Next I ventured to inject in man the filtrate of the bouillon culture of different ages and in this experiment, repeated three times on different human subjects free from syphilis, I have obtained nothing more than a slight reddening and swelling at the point of inoculation, and this of but a few hours'

duration. The cases were kept under observation for about two months, and in this time no sign of reaction or intoxication showed itself. Finally I inoculated a woman free from syphilis, placing the same micro-organism on an abrasion artificially produced on the arm and kept protected from any possible contamination by means of a watch glass, as once used by Ducrey for keeping pure and isolated the bacillus of the soft ulcer. No reaction or alteration showed itself at the point of inoculation, and the case being under examination for more than three months has never presented any symptoms of syphilitic infection."

Dr. Pini excuses the publication of his negative results as being of possible value to those who might be inclined to duplicate his work. He interprets the silence of the French investigators to mean that they have abandoned faith in their supposed discovery of the microbe of syphilis, and cites the work of Joseph and Piorkowski, reported by the Berlin Medical Society, March 5, 1902, as further justification of the belief that the specific organism of syphilis has yet to be discovered. V. S.

An Epidemic of Trichophytosis of the scalp in school children. By Werther. (Monatshft. f. Prkt. Dermt. Band 36--No. 3.)

Werther describes an epidemic of ringworm in school children, seventeen out of thirty being affected. The main points of interest being:

1. The different clinical forms in some of the cases.
2. The identity of the trichophyton as shown by cultures.
3. The botanical peculiarities as shown in cultures, especially in the method of "Plaut."
4. The successful inoculations of pure culture in animals and on man.

The source of infection could not be positively established, but the first case developed in a boy on his return from a vacation. The author mentions cattle as a possible source of infection, although near the end of his article he identifies the growth as Sabouraud's tricophyton of the cat. He recommends the ingenious method of Plaut (Münch. Med. Wochenschr., 1902, No. 5, S. 208) of placing the suspected hairs between a slide and a cover-glass, which is placed on moist blotting-paper in a Petri-dish. The aerial forms of growth from the tricophytic hair give a very typical picture in from six to eight days. The endogenous spores or terminal chlamydospores render identification easy. This dry cultivation of the tricophytons frees it from contamination by bacteria and pus-cocci, and affords an admirable method in studying the trichophytons.—Mewborn.

Vaccinia of the Female Genital Organs. Drs. G. Lowenbach and A. Brandweiner. (Monatshft. f. Prkt. Dermat. 1903., xxxvi--5.)

The female genital organs become the site of vaccinia lesions. The affection is rare. It begins with itching and burning of the parts, followed by redness and swelling. After a few days clear, pea-sized vesicles appear. They are round and have an inflammatory red halo, and often become confluent. After a few days the vesicles change to pustules, which become umbilicated. Often the vesicles rupture before forming pustules, and then we find a vaccinal ulcer. The patients often come for the first time to the physician after the vesicles are all broken down, and he finds on the greater and lesser labia, on the inner side of the thighs and about the anal region a number of small ulcers which are round, or scalloped if due to the coalescence of neighboring vesicles or pustules. About the ulcers

the skin or mucous membrane is bright red and slightly swollen. The inguinal glands are swollen. In a few days the ulcers crust over and heal without scars. Infection takes place usually by the transference of the virus by the finger from a vaccine lesion on some other part of the body. The disease must be differentiated from pemphigus, eczema, herpes, venereal and syphilitic ulcerations. Herpes offers the greatest difficulty in diagnosis, but in herpes the vesicles are not so large nor so tough, and they are not accompanied by swellings in the groins.—Jackson.

Phototherapy with Iron Electrodes. Prof. Kromayer. (Derm. Zeitsch. 1903--x--1.)

In an experimental and clinical investigation of the results to be obtained by the use of a lamp fitted with iron instead of carbon electrodes, Kromayer used a lamp made after the general model of the Lortet-Genoud lamp used in Paris. He has found the iron electrode lamp to be less efficacious in treatment than the Finsen light, though it has greater bactericidal power. He believes this is due to the fact that the iron light has forty times as many erythema producing rays as the carbon light, and therefore does not penetrate as deeply into the tissues, it being a law that the more a ray of light produces irritation of the tissues the less deeply will it penetrate. The iron light is much richer in ultra violet rays than is the carbon light, and it is possible that if in some way its irritating quality can be lessened it will penetrate much deeper. He accomplished this by passing a solution of 8 in 100,000 methyl blue through the quartz chamber of the lamp. With his apparatus he treated 7 cases of lupus vulgaris and cured 1 case; 1 case of lupus erythematosus, cured; 3 cases of alopecia areata, all cured. —Geo. T. Jackson.

Observations on Tertiary Syphilis. Johannes Fick (Prof. Dr. Ehrmann's Dispensary in Vienna). (Arch. f. Derm. u. Syph., 64, 1903, p. 61.)

Fick gathered the material for the last ten years in Dr. Ehrmann's dispensary and in a critical study of other statistical material of the same character tries to add some points to the solution of one of the most important questions in the treatment of syphilis, *i. e.*, whether the intermittent or symptomatic method of treatment gives the smaller number of tertiary manifestations. In his criticism of or in his comparison with the results of other doctors, he does not consider the way the treatment was executed, whether by inunction, injections or internal administration of mercury; he merely takes into account the intermittent or symptomatic administration of mercury. In Ehrmann's dispensary the patient was treated for the early manifestations of syphilis either by inunctions or by injections of mercury, iodide of potash being only used for relieving headaches and pains in the joints or bones. He collected from the records of the dispensary five hundred and sixteen patients who came under observation between the years 1892 and 1897, and out of these patients only five appeared in the dispensary with tertiary manifestations between the years 1898 up to the date of publication. The remaining five hundred and eleven were all treated by the intermittent method; that is, energetic mercurial treatment was alternated with mild mercurial treatment and between the periods of treatment longer intervals were observed, and all remained free from tertiary manifestations.—Lapowski.

Circumscribed Gangrene of the Skin After an Intramuscular Injection of Salicylate of Mercury. Hermann G. Klotz. (Arch. f. Derm. und Syph., 64, 1903. 265.)

The writer, with all due care and precaution, administered during a period of six weeks five injections of salicylate of mercury in a suspension of one part of lanoline and fourteen parts of olive oil, into the glutea of a syphilitic patient. After the fifth injection severe pain appeared in the left lower limb, and a drop of blood oozed out with the withdrawal of the needle. The patient also experienced slight dizziness, but was able to go home. The pain lasted for one week. The left gluteal region was swollen, red, with a number of blood extravasations scattered over the swollen region; outside of that two sharply defined, hard infiltrations of a deep red-blue color with superficial bullæ could be seen upon the swollen region. These infiltrations underwent necrosis, the tissue being destroyed to the depth of 5 mm. The necrotic places did not correspond with the place of the insertion of the needle.—Lapowski.

The Behavior of Preparations of Iodine, Especially of Potassium Iodide and of Iodipins in the Organism. Fritz Lesser (Neisser Clinic). (Arch. f. Derm. u. Syph., 64, 1903, 90.)

Since the introduction of the newly invented remedies containing iodide in the treatment of syphilis, some observers and investigators have undertaken to determine, with new methods of investigation, the behavior or fate of the newly invented iodide compounds in the system and their value in treatment as compared with the old iodide salts, especially potassium iodide. Lesser, in a very interesting and convincing way, tries on one hand to solve the question of the ultimate chemical change of iodide of potash in the body of patients to whom it was administered, and, on the other hand, to show also the chemical fate of the new iodide preparation, iodipin, when given to a patient suffering from syphilis. After a critical review of the findings of other writers upon this subject he arrives, from his ingenious investigations, at the following conclusions:

(1) As long as iodide is eliminated by the urine it also circulates in the blood.

(2) The potassium iodide introduced into the body is found in the organs only as an alkaline iodide. A separation of iodine and albumen can neither be shown in the blood nor in the remoter organs. Therefore not iodine but its salt is the active agent, and this agent is the cause of iodism. On the other hand, all preparations of iodine (*iodalbacid* and *iodipin*), which are changed in the organism into an alkaline iodide, must also have the same unpleasant after-effects as an alkaline iodide, according to the amount of the drug circulating in a given time.

(3) Alkaline iodide not only circulates in the plasma, but also penetrates the blood cells. It is divided evenly between the plasma and blood corpuscles.

(4) After the administration of the preparations of iodine, the lungs take up the greatest amount of alkaline iodide. The organs contain it in proportion to their weight.

(5) Iodipin administered per os is easily absorbed, but is also quickly eliminated.

(6) After administration of iodipin per os the plasma of the blood and of the remotest organs contains alkaline iodide and iodine fats, iodide of potas-

sium alone penetrating into the blood corpuscles. The iodine fats contained in the organs are changed into alkaline iodides in twenty-four hours. In the tissues which physiologically contain fat, as liver, fat tissue, marrow of bones, the change of iodine fats into alkaline iodides does not take place as quickly as in other organs.

(7) The absorbed iodipin is entirely changed in the organism into alkaline iodide. The iodide fats are not eliminated by urine.

(8) After injection of iodipin, alkaline iodides are found in the urine several hours later. The circulation of iodine in the blood and the consequent elimination by the urine lasts for many months, eventually longer than a year after the administration of the last injection of iodipin.

(9) After injections of iodipin, iodine fats are present only in traces in the blood and in the remotest organs.

(10) The elimination of iodine in the urine, both after introduction into the system of iodipin or of potassium iodine, occurs only in an inorganic form.

(11) The iodipin is not a substitute for potassium iodine, it only enables us to introduce iodine into the system for a long time without giving rise to the unpleasant after-effects of iodide of potash.—Lapowski.

BOOK REVIEWS.

Diseases of the Skin. Joseph Grindon, M.D. Lea Bros. & Co., 1902. New York and Philadelphia.

This is the volume devoted to dermatology in the Series of Pocket Text Books edited by Gallaudet. All of this is curious psychologically. Why should the Leas, who already publish Jackson's, Hardaway's and Morris' books (very much too good for the average student, any one of them), publish another of exactly the same sort? That it is fit company for the others has nothing to do with the question. What occasion is there for the series at all, and to what end was the editorship instituted? A judicial mind may be necessary to restrain the enthusiastic specialist, but it is doubtful if the editor exerted his privilege so much as to correct the dotting of an i in the original manuscript.

The book has a good appearance. It is well printed, has the brilliant red cover that sets off library shelves so well, and its illustrations in half-tone generally show what they are intended to do. The "Rules for Diagnosis" are exceptionally sound, as is the general run of the views presented. There are some points which may strike maturer minds as peculiar. For instance, seborrhœa and pityriasis capitis are separately considered, the first under anomalies of secretions, the second under inflammations, although the terms *are* given as synonymous. Under pityriasis the statement is made that recent investigation (in etiology) is narrowing down to Welsh's staphylococcus, while no organism but Sabouraud's microbacillus is mentioned under seborrhœa. It may be that to call dandruff an eczema is to cast off from clinical moorings, but pathologically it is an inflammation and potentially it is an eczema. Moreover, we do know the pathology of eczema and of eczema seborrhoicum, even if so much can not be said of their causation. In the etiology of seborrhoic eczema, Unna's micrococcus is mentioned to be dismissed and Sabouraud is left out of consideration. Again appears the out-worn theory that the comedo consists of inspissated sebum, but while Grindon clings to a tradition of this sort, it must be said that he presents the other

side as well. A part of this fondness for old friends is the definition at the head of each section, in reality not a definition at all but a summary of clinical features.

The section on new growths is more than usually good, but the consideration of rodent ulcer should be remodelled on the lines drawn in Dubreuilh's recent monograph. It is an epithelioma and both its clinical and pathological features are peculiar to it. Grindon deprecates the attempt to identify hidradenitis suppurativa and acne necrotica by pathologists and especially their efforts to supply one name for the whole group. In spite of the compliment he pays them, they will probably pursue the even tenor of their evil way when they discover that he knows so little of this process as to hold its pustulation and site as anything but the merest accidents.—J. C. J.

A Treatise on the Acute, Infectious Exanthemata. Including Variola, Rubeola, Scarlatina, Rubella, Varicella, and Vaccinia, with especial reference to Diagnosis and Treatment. By William Thomas Corlett, M.D., L.R.C.P., Lond. Professor of Dermatology and Syphilology in Western Reserve University; Physician for Diseases of the Skin to Lakeside Hospital; Consulting Dermatologist to Charity Hospital, St. Alexis Hospital,, and the City Hospital, Cleveland; Member of the American Dermatological Association and the Dermatological Society of Great Britain and Ireland. Illustrated by 12 Colored Plates, 28 Half-tone Plates from Life, and 2 Engravings. Pages viii-392. Size, 6¼ by 9¼ inches. *Sold only by Subscription.* Price, Extra Cloth, $4.00 net, Delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This is a large work treating of the exanthemata. In his preface the author has laid especial stress on the difficulties in the way of giving practical instruction in these diseases, and points out the value of plates and photographic reproductions in teaching his theme. Excepting the more elaborate artistic efforts reflected in the atlases of Hebra, Kaposi, Morrow and Fox, ordinary text book colored plates, in the opinion of the critic, are very unsatisfactory. Especially is this so with the exanthemata. The author's plates on variola are quite good, whereas those illustrating scarlet fever, measles, varicella are only topographic and diagramatic. The author devotes 150 pages to the consideration of variola and allied themes. The history and literature are very complete. The symptomatology also. The treatment is quite full and reflects an evident familiarity born of large experience in this disease. On the other hand, we think the author has not shown strength on the subject of vaccination with human virus. He does not condemn it sufficiently and devotes too much space to the possibilities of transmission of disease through an operation which is, in this country at least, obsolete. We miss definite instructions as to after treatment in vaccination and the accidents especially. The author in this chapter also thinks that teething is a bar to vaccination. If this were so infants in the nursing period would have to forego the operation. This would be a serious situation in large cities. Teething as such is only a physiological process and cannot contraindicate vaccination. We admit that the period of teething is, as a matter of clinical experience, one of great susceptibility to infection. It is our aim and duty, however, to be able to avoid accidents even in vaccination. This is the theory of modern medicine. The consideration of the exanthemata, measles, scarlet fever, rötheln occupies the remaining part of the work. The history, literature and symptomatology are very complete, and as a literary production we know of no better exposition of this subject. To-day, however, the practitioner and student looks for something more. We miss the author's own personal clinical critique and deductions from a large experience. This lack of personal element is evident in the articles

upon scarlet fever and measles. We can illustrate in scarlet fever. When speaking of *scarletina sine febre* the author does not venture to say that these cases of scarlet fever without fever and a typical eruption may have been rötheln. We know that it is sometimes almost impossible to state in some cases whether we are dealing with a mild scarlet or a case of rötheln; and from the critic's standpoint, the diagnosis in such cases must always remain in doubt. Forms of otitis are not taken up as they should be in a work of this character. We have seen such cases confound the physician and make him uncertain as to whether he was dealing with mastoid involvement or whether the temperature was due to other causes. Stress is laid on the so-called "strawberry tongue." The strawberry tongue is interesting from an academic rather than a clinical standpoint. The forms of nephritis are not sharply defined and their treatment and management are complete from a literary rather than a clinical standpoint. Would the author treat a case of suppression with uræmia and no œdema the same as he would a case having œdema and passing large quantities of urine? Is the amount of urine passed always a standard? Is a patient passing large quantities of urine free from the danger of uræmia? The practitioner receives no answer to these important questions. The author makes much, we think rather prematurely, of the serum treatment. We would rather have had the author's personal experience in this very interesting and as yet unsettled field of work. In the article upon measles, which is headed rubeola though measles is the nomenclature of the article proper, we find that the author gives a most complete résumé of the literature of the exanthema, but fails to appreciate its true value in isolation, nor does he bring out clearly the fact that the buccal exanthema and no other is of diagnostic value. He speaks of coryza, etc., in the prodromal stage and does not say that these are frequently absent when the buccal exanthema can be found. The plate of the buccal exanthema is unsatisfactorily reproduced. We would hesitate to place a baby with measles and even a complicating broncho-pneumonia in a bath at 60 degrees. Much harm is done in this way. The practitioner will find that he prefers, in measles at least, not to chill his patients and also to wait a few days before instituting hydrotherapy to see whether 104½ degrees or even a temperature of 105 degrees for a short time daily, will not yield to the natural course of the disease aided by sponging with alcohol and luke-warm water.

In rubella the author does not sharply define the measly and the scarlatina-form eruptions. We cannot understand, in view of the lengthy description of the buccal exanthema in measles, why the author should say under the heading of diagnosis: "There is no pathognomonic or unvarying guide between these two diseases." The critic has seen many epidemics of rötheln, and finds that the unvarying sign of measles, with the exception of an inconsiderable number of cases, probably two per cent., is the buccal exanthema. As we have said, we rather get into difficulties when trying to differentiate between mild forms of scarlet fever and rötheln. The pathology, especially of the skin, is very good and up to the hour all through the work. The bacteriology is particularly complete. The literature, though in some parts faulty, is very complete. We hope in a second edition to see more of the author's personality reflected in a work complete as it is in a compilatory and literary sense. The general typography is good and the proofs carefully revised.—H. K., N. Y.

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A CASE OF PAGET'S DISEASE OF THE NIPPLE.

BY GEORGE THOMAS JACKSON, NEW YORK.

IN September, 1896, I read before the American Dermatological Association the report of a case of malignant papillary dermatitis, together with the pathological report upon the specimen by Dr. J. S. Ely. [*Jour. Cutan. and Gen. Urin. Dis.*, 1896, xiv—428.] Dr. Ely regarded "the lesion in the skin as inflammatory in nature, due primarily and pre-eminently to a change in the corium of such a nature as to cause a very considerable connective tissue development, and, by interference with the nutrition of the skin, to lead to an intensely œdematous condition of the epidermis and of the papillary layer of the corium." He regarded the tumor formation in the gland as a "fibroma of the so-called pericanalicular variety," and that this was primary, while the skin lesion was secondary.

Since 1896 I have had several cases, but the one here reported is the only one from which I was able to obtain material for microscopical examination. As will be seen, the history of the case is meager. As the disease is a well-recognized one and the pathology is of more importance than the description, I venture to report it, together with the pathological study by Dr. Otto H. Schultze:

Mrs. J. L., æt 68. Widow.

The patient came to me on May 15, 1900. She stated that the disease had existed for nearly three years, and that the first symptom she noticed was a feeling of soreness under the right nipple and a few drops of blood. Since then the disease had been steadily progressive.

Examination showed that about the right nipple there was a red, raw patch about the size of a silver dollar; this was sharply defined, and gave to the touch the impression of infiltration into the tissues. The nipple had nearly disappeared, being drawn down into the breast so as to form a deep pit. The right breast was atrophied and all through it, but especially at the upper and outer aspects, there were

hard masses. There were no appreciable enlargements of the axillary glands.

The patient's health was fair, though of late she had become weaker. There was no history of injury or anything to account for the disease. I advised her to have the whole breast amputated by a surgeon at once. On the 29th of May she was operated on by Dr. H. Packard, in a Boston hospital. The whole gland and a portion of the pectoral muscle were cut away, and the axillary glands were removed, as they were found to be enlarged. Hard nodules were also removed from under the clavicle.

Dr. George E. May, her physician, reported that the patient made a good recovery from the operation. Three weeks afterwards she complained of nausea and distress in the abdomen. Her liver was found markedly enlarged. Ascites followed, with marked prostration. She became suddenly delirious and was dead in three days. She had no pain, icterus, or constipation. Vomiting did not occur until the last two days of her life.

Dr. Packard kindly sent me a portion of the diseased tissue, the results from the examination of which are given below:

PATHOLOGICAL REPORT UPON DR. JACKSON'S CASE OF PAGET'S DISEASE.

By Otto H. Schultze, M.D.,

Professor of Pathology in University of Vermont; Instructor in Pathology in Cornell University Medical College.

The portion of a breast, received from Dr. George T. Jackson, was about 6 cm. in length and 3 cm. in width and thickness. It was wrapped in gauze, soaked with 10 per cent. formalin solution, so that the skin surface was partly folded over the underlying tissue.

Beneath the subcutaneous adipose tissue, a firm mass presents on one surface of the specimen (evidently the surface of section from the rest of the breast), a fibrous connection with the skin. In this situation the skin is retracted, and presents a darker area adjoining the line of section and of round contour on the skin surface of the specimen. This area is covered with minute papillæ, and is traversed by several radiating fissures which nearly reached its margin.

A cross section through the middle of the specimen shows a marked thickening of the skin in the papillary area above described. The fibrous band of connection between the skin and the firm mass is quite narrow. The mass presents a bluish-white fibrous structure, with many firm, white streaks and dots, larger opaque, yellowish-white areas from 0.5 mm., in diameter, to 3 mm. x 1 mm., in extent, and a few cross sections of canals, the largest 0.5 mm. in diameter.

Microscopical sections were made by the celloidin method. The accompanying photographs of sections stained with hematein were made by Mr. John N. Lett.

The skin is normal up to the margin of the papillary area above described. From this point to the edge of the specimen, namely, the plane of section from the rest of the breast, the pathological changes become more marked. (Fig. 1, from left to right.) These changes begin in both the epidermis and corium. In the epidermis the deeper prickle cells become enlarged and multiply. Many poorly fixed mitotic figures are found. The protoplasm of the cells diminishes in staining reaction, and clear spaces appear about the nucleus (Fig. 3). These spaces increase in extent so that finally the periphery of the cell alone remains. The nucleus is enlarged, vesicular, and pale, or presents a cloudy granular appearance. Where the degeneration of the protoplasm has advanced the nuclei are smaller, more densely stained, or broken up. Isolated cells are found retracted, and entirely or in part surrounded by a clear space. Some spaces of round contour are found, containing nuclear fragments or a few polynuclear leucocytes. The basal layer of the epidermis appears compressed, and its nuclei stain more densely. No evidence of active proliferation or invasion of the corium is found.

The changes described finally involve the entire layer of prickle cells. The granular and horny layers become irregularly thickened. The cells of the granular layer are larger and in places their granules are so dense that the structure of the cell is obscured, presenting thick, densely pigmented areas in the section (Fig. 3). The thickening of the horny layer is not so pronounced. The entire epidermis is thus thickened and the interpapillary projections become longer (Fig. 3).

With the advance of the degenerative process in the prickle cell layer, the horny layer disintegrates and becomes loosened. With its separation, the granular layer lies bare upon the surface and in turn is also lost. Finally the prickle cell layer becomes entirely disintegrated and disappears. The basal layer can be traced to the border of the ulcerated area, and upon its surface isolated fragments of this layer are found (Fig. 4).

A cross section of a fissure (Fig. 4) presents an appearance that might at first be mistaken for an invasion or down growth of the epidermis into the corium. On closer study it becomes quite clear that the fissure is due to a retraction of the skin. The epidermis presents throughout the thickness of the invaginated fold the changes already described. The basal layer is everywhere clearly marked off

from the corium, and shows no evidence of invading it. The prickle cells above the basal layer are in a stage of degeneration, and so disintegrated in places as to leave the basal layer almost bare. The length of the fissures and their radiating arrangement is conclusive evidence of retraction.

In the corium the first change appears in the papillary layer (Fig. 3), and consists of an infiltration with lymphocytes about the vessels. Among the lymphocytes numerous plasma cells are found. This infiltration finally becomes so dense that the structure of the papillary layer is almost obscured (Fig. 4). As the process advances, an infiltration of the same character appears about dilated vessels in the deeper layer of the corium. Finally where the epidermis has completely disintegrated, a new growth of blood-vessels, surrounded by a dense infiltration of lymphocytes and plasma cells, appears in the corium (Fig. 5). In and near the area of ulceration polynuclear leucocytes appear in moderate amount. They also infiltrate the degenerating epidermis.

In the firm mass or tumor, the parts visible with the unaided eye and described as round yellowish, or opaque white dots and streaks and some as canals, are found to be the cross and longitudinal sections of lactiferous ducts. (Fig. 1.)

They are markedly increased in size. Their walls show an epithelial lining of four and more cells in depth. These cells are increased in size, are round or polygonal from mutual compression. The outermost are more markedly compressed and stain more deeply. They show no evidence in the larger ducts of breaking through the surrounding elastic tissue. The inner cells show degenerative changes in the appearance of a clear zone about their nucleus. The nucleus becomes smaller and stains more deeply.

In some ducts the lumen is quite large and empty, in others it is filled with epithelial cells showing all stages of degeneration to complete disintegration into a granular detritus.

In some of the larger ducts, small papillary projections of epithelial cells into the lumen are found.

In other ducts the lumen is narrowed by the thickened epithelial wall.

The stroma of the breast is densely fibrous, and in areas adjoining the ducts presents an infiltration of lymphocytes and plasma cells about the vessels.

In the smaller ducts (Fig. 2), the epithelial cells show a distinct appearance of invading the surrounding tissue.

In a few places groups of alveoli about the terminal ducts show

an increase in size and proliferation of their epithelial cells, with loss of the lumen. The outermost cells are more densely stained and compressed. In the deepest part of the breast adjoining the muscle, unchanged ducts and alveoli were found.

The changes described in the skin, namely, infiltration in the papillary layer, proliferation and degeneration of the epidermis, beginning in the deeper layer of the prickle cells, and finally proceeding to complete ulceration, are characteristic of Paget's disease or malignant papillary dermatitis. The character of the process is distinctly inflammatory. The lesion differs as widely from eczema as it does from epithelioma. Its differentiation from acute eczema is so patent that it need not be discussed here. From chronic eczema, to which this disease has so frequently been likened, and with which it has so frequently been confused, it differs in the subsequent degenerative character of the process ending in complete ulceration.

Following the primary proliferation of cells in the deeper layer of the rete mucosum, and the thickening of the epidermis, the interpapillary projections of the epidermis increase in length, with a corresponding enlargement of the papillæ. An actual invasion of the corium does not occur. There is no evidence of active growth in the basal layer of the epidermis. On the contrary, with the subsequent degeneration of the deeper prickle cells, the basal layer appears compressed. The final complete ulceration of the epidermis serves to differentiate this lesion clearly from epithelioma.

Among the frequent misconceptions of Paget's disease, that of "an eczematous condition of the nipple and areola terminating in epithelioma" is about the worst. How common these misconceptions are, a glance at the text-books on surgery and pathology will show. They originate in part from association of the skin lesion with a malignant tumor of the breast and the old confusion of the terms carcinoma and epithelioma.

Whatever the genetic connection between the skin lesion and the breast tumor may prove to be, it is quite certain that in the reported cases which have been examined microscopically and in the present case, the tumor of the breast is not an epithelioma, nor have any authentic cases of an epithelioma growing from the epidermis of the nipple and areola, on the basis of a Paget's disease, or from there invading the breast, been reported. On the other hand speculation in this regard has been most industriously indulged in.

Another source of error leading to the misconception of epithelioma originating from Paget's disease, lies in the fact that carcinoma originating in the lactiferous ducts may infiltrate the corium to a con-

siderable extent. The cells derived from the epithelium of the larger lactiferous ducts closely resemble the lower cells of the epidermis, which is not surprising when we consider the close genetic relationship of the ducts with the epidermis of the nipple and areola. The true origin of these cells infiltrating the corium may be overlooked, and from their close resemblance to the cells of the epidermis may be ascribed to an invasion of the epidermis. With elongation of the interpapillary projections of the epidermis characteristic of Paget's disease, and with the papillæ invaded by carcinoma, the sections are often very confusing. Where the epidermis previously changed by Paget's disease or not, has ulcerated over an area of corium infiltrated with carcinoma, the condition may at first be mistaken for epithelioma originating from the epidermis. More extensive examination of such specimens, including the edge of the ulcerated area, and the region of the larger lactiferous ducts as they pass through the corium, will clear up the true origin of the growth from the lactiferous ducts.

Through the absence of carcinomatous invasion of the corium from the lactiferous ducts, the growth in the larger ducts remaining confined within the surrounding elastic tissue, the present specimen offers an excellent opportunity for obtaining clear pictures of this disease.

The term malignant papillary dermatitis was applied to this affection by George Thin, to whom we owe the first and most excellent histological study of the disease. It is quite clear from a perusal of his report that the adjective "malignant" was applied with reference to the association of this disease with carcinoma of the mamma, not with the idea that the skin affection was itself a carcinoma or became a carcinoma. On the contrary, he clearly describes the carcinoma as originating from the lactiferous ducts, and coined another term, namely, "duct carcinoma," to distinguish this type from "adenoma" and "scirrhus carcinoma."

Thin pointed out two modes of growth, namely, an increase in the thickness of the epithelial wall of the duct, the surrounding elastic tissue remaining intact, and secondly, an invasion of the stroma by cells which have broken through this tissue.

In the present specimen the growth in the larger lactiferous ducts is limited to an increase in size of the ducts, through hyperplasia of the epithelial cells of their walls. In the degeneration noted in the cells bordering the lumen, and the inflammatory reaction in the neighboring stroma, the changes bear some resemblance to those found in the skin. There is, however, a marked difference. The degeneration does not extend throughout the entire epithelial wall with complete

disintegration as it does in the epidermis. Notwithstanding degeneration of the inner layer, growth and multiplication continues in the outer. Eventually, the growth of epithelium breaks through the surrounding elastic tissue and invades the stroma.

The changes in the terminal ducts and their neighboring alveoli (Fig. 5) present the picture of adeno-carcinoma. These areas occupy a very small extent of the cross section through the breast (below and to the right in Fig. 1). Such areas, judging from other specimens of carcinoma of the breast in which all stages could be made out, eventually develop into islands of epithelial cells, all trace of lumen or of glandular structure being lost. These islands are larger or smaller, and closely adjoining one another or scattered, depending upon the accompanying proliferation of the stroma.

The appearance of carcinoma of the breast varies primarily according to the parts of the epithelial structure from which the growth takes its origin, namely, larger lactiferous ducts, terminal ducts, or alveoli; secondly, according to the advance in the growth and further departure from glandular structure in appearance; thirdly, according to presence or absence of invasion of epithelial cells in the lymph spaces of the stroma; and finally according to the extent of proliferation of the stroma. If numerous sections are made from different parts of a carcinoma of the breast, some of these different types are often found in the same tumor.

The type of carcinoma in Thin's[1] four cases, in Duhring's,[2] in Fordyce's[3] and in the present case, is chiefly "duct carcinoma." I have examined several cases of duct carcinoma of the breast in which there was no indication of Paget's disease. Although the majority of the cases are associated with carcinoma of the breast, still many of the reported cases are not.

In the present state of our knowledge the genetic connection between Paget's disease or malignant papillary dermatitis, and carcinoma of the breast, remains a matter of speculation. The two affections, although they are frequently associated, and, as pointed out, bear some points of resemblance, are nevertheless essentially different. The theory that the skin affection is caused by the irritation of carcinomatous material discharged from the ducts, fails to meet the cases in which the skin affection precedes the appearance of a tumor by many years or is not followed by a tumor at all. On the other hand, the theory that the process beginning as a surface infection, creeps down

[1]Thin. *Brit. Med. Journal,* 1881, p. 763.
[2]Duhring. *Am. Journal. Med. Sc.,* 1884, p. 141.
[3]Fordyce. *N. Y. Med. Jour.,* Oct. 2, 1897.

the ducts, was based on a misinterpretation of cell inclusions as parasites. Moreover, the process in the epidermis and in the ducts is not the same.

From the fact that malignant papillary dermatitis is incurable, and in the majority of cases is associated with carcinoma of the breast, the extirpation of the breast with the diseased area of the skin, without waiting for the clinical diagnosis of a tumor of the breast, seems advisable.

A "duct carcinoma" may be slow in growth. Moreover, the resistance or mass felt beneath the skin upon which the diagnosis of tumor is usually made, is really due in many cases more to the dense fibrous stroma than to the actual increased amount of epithelial or carcinomatous new growth. Yet tumors of this description may, when their epithelial elements once gain access to lymphatics, produce extensive metastases, which from the clinical appearance of the primary tumor are entirely unexpected.

DESCRIPTION OF PLATES.—To Accompany Dr. Geo. T. Jackson's Case of Paget's Disease.

FIG. 1. (x 10.) Malignant papillary dermatitis and duct carcinoma of the breast. Transverse section through the skin and tumor. Above, normal skin to the left side, the area of diseased skin is on the right. The skin was somewhat folded. The area of malignant papillary dermatitis begins just to the left of the crest of the fold. The progressive thickening of the epidermis and corium from this point to the right is apparent. The tumor presents a dense stroma in which the cross section of numerous ducts are found, their epithelial walls are markedly thickened, some are empty, others contain degenerated epithelial cells. Below and to the right, areas of smaller ducts with a growth in the neighboring alveoli, are presented.

FIG. 2. (x 45.) Sections of smaller ducts with neighboring alveoli showing a growth of epithelial cells in both, which here invade the adjacent stroma. The latter shows numerous areas of infiltration with lymphocytes and plasma cells.

FIG. 3. (x 45.) Malignant papillary dermatitis. The peripheral part of the skin lesion, showing on the right side the earliest change in the deeper layer of the prickle cells. The epidermis progressively thickens and degenerates. The basal layer is sharply marked off from the corium. The papillary layer shows an increase in the size of the papillæ, which are infiltrated with lymphocytes and plasma cells. The same infiltration is seen about vessels in the deeper part of the corium.

FIG. 4. (x 45). Transverse section of a fissure. Growth and degeneration of the epidermis, is shown, on the left side quite to the basal layer. The latter is more intensely stained in parts compressed, and is clearly marked off from the infiltrated papillary layer of the corium.

FIG. 5. (x 45.) The area of ulceration. Above and to the right the basal layer of the epidermis is still sharply marked off from the corium. On the rest of the surface the corium is denuded of epidermis except a fragment of the basal layer here and there. There is a new growth of connective tissue cells and new blood vessels, intense congestion, and dense infiltration with lymphocytes, plasma cells and a few polynuclear leucocytes.

PLATE XXIII.—To Illustrate Dr. Geo. T. Jackson's Article.

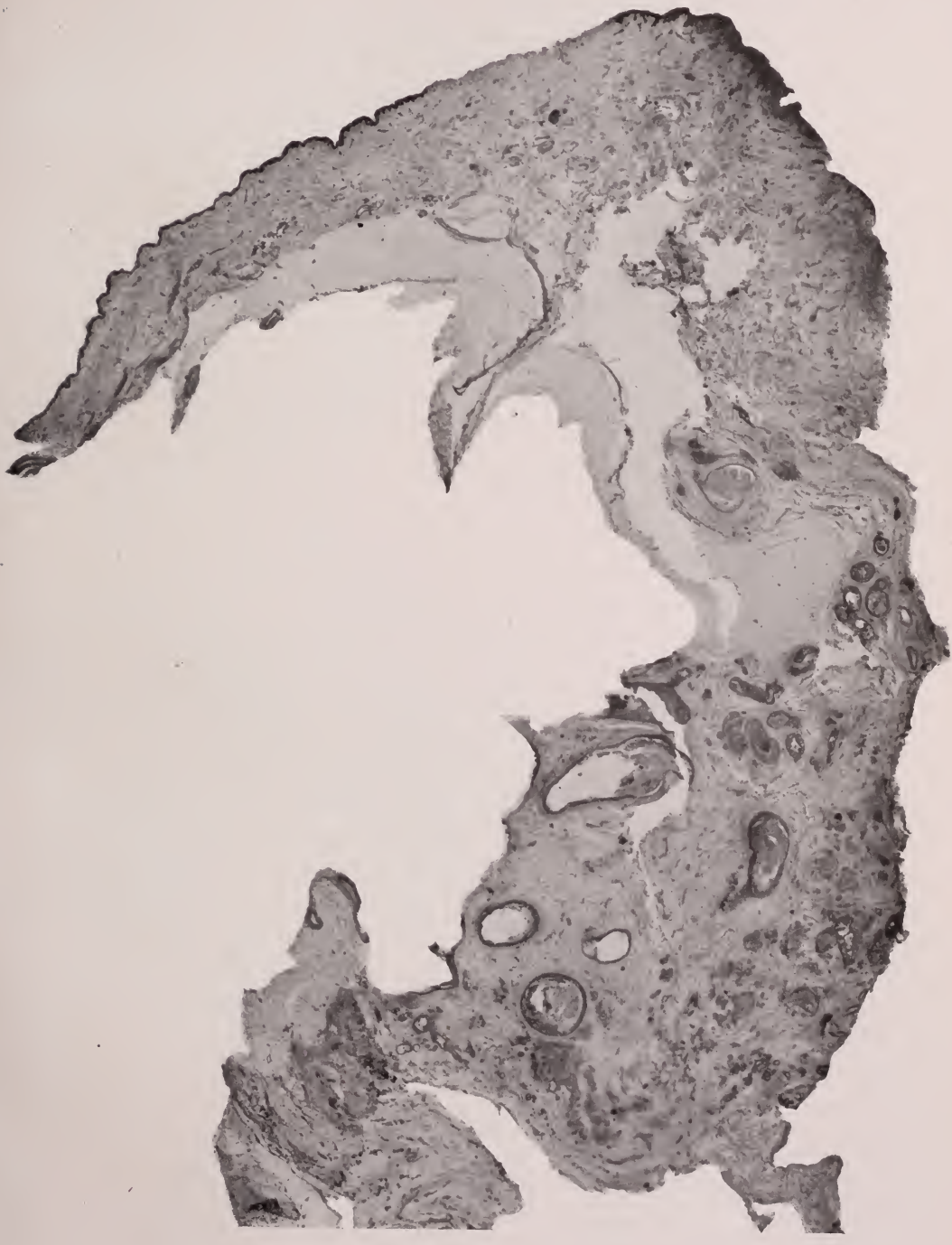


Fig. 1. (X 10.)

PLATE XXIV.—To Illustrate Dr. Geo. T. Jackson's Article.

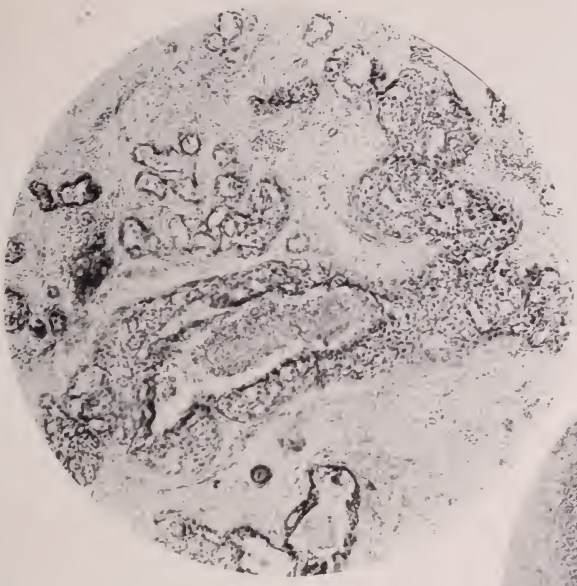


FIG. 2. (X 45.)

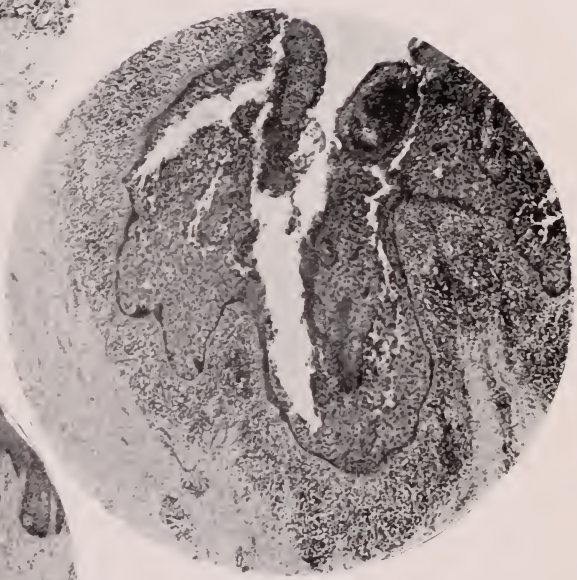


FIG. 4. (X 45.)

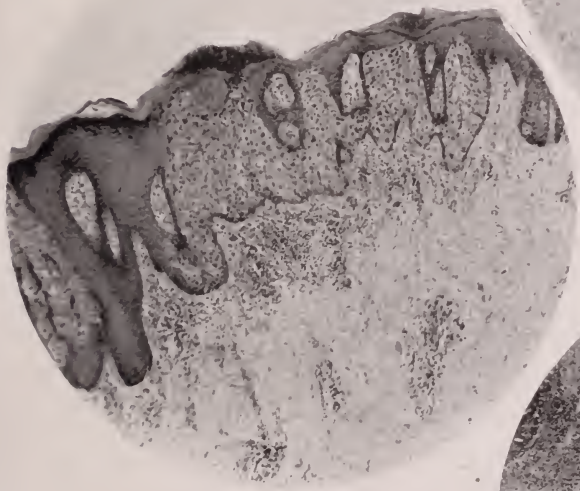


FIG. 3. (X 45.)

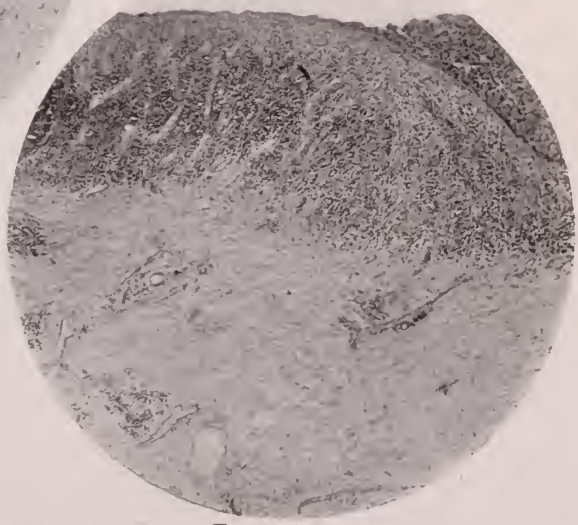


FIG. 5. (X 45.)

SOME THERAPEUTIC PROPERTIES OF BONE MARROW.

By Chalmers Watson, M.B., F.R.C.P.E.

In the *British Medical Journal* of March 22, 1902, the writer published a preliminary communication on the treatment of deafness of middle ear origin, the basis of the treatment being the use of a preparation of bone marrow. It was there pointed out that the use of this preparation in cases of chronic non-suppurative middle ear disease was a particular application of a general theory regarding the function of the bone marrow. In broad outline this theory is, that the bone marrow produces an internal secretion of vital importance in the economy; that this substance is prophylactic against the injurious action of various bacteria which in health exist as saprophytes in different tissues; and that its defective production is liable to be followed by pathogenic action of these micro-organisms. The results of this pathogenic activity vary much in different subjects, in accordance with *the all-important factor of individual reaction.* As the main sites of these bacteria are the respiratory tract, skin, alimentary canal, and vagina, it follows that disease will be more or less directly associated with one or other of these surfaces as the main source of infection. In the writer's opinion, the chronic aural disease there considered is to be regarded as *a chronic infection from the nasopharynx.* The principles underlying its treatment, with a record of later results of treatment, and the limitations to its success, were described in the *British Medical Journal,* September, 1902.

In the *Lancet* of October 18, I recorded the results of treatment, along similar lines, of a series of five cases of psoriasis, this disease being regarded as *a chronic infection from the skin surface.* In a more recent paper in the *Edinburgh Medical Journal,* March, 1903, I described certain clinical facts noted in one of the severe cases under observation, drawing special attention to

1. The co-existence of deafness of internal ear origin.
2. The marked polyuria with incontinence of urine, and
3. The intercurrent febrile attack associated with an adenitis.

Attention was further drawn to the fact that in the course of treatment other symptoms of disease (including 1 and 2 above) not apparently connected with the skin affection, underwent a marked improvement coincidently with the disappearance of the skin eruption. In these communications it was suggested that the closer investigations of some chronic skin affections, with special attention to the examina-

tion of the excreta (urine, fæces, etc.) and a study of the cardio-vascular tone and associated capillary reaction of the skin, would demonstrate that these diseases are not affections of the skin in the sense usually regarded, but are local reactions in a general toxæmia.

If the general theory above defined is a correct one, we might expect that a product of bone marrow would possess therapeutic value in directions other than these already recorded, and the object of this communication is to place on record the results of treatment of a case of lupus vulgaris. The comparative rarity of this affection has precluded me from making a more extended trial of the treatment, but in view of the decisive nature of the results obtained in this case, I feel satisfied in recommending that further observations be made. My object in investigating this case was a twofold one. In the first place I wished to determine what effect, if any, the local application of myelocene would exert upon the pyogenic bacteria which are the complicating factors in most cases of lupus vulgaris, and which impart to that disease its characteristic ulcerative features; and secondly, to ascertain what influence would be exerted on the tuberculous nodules which are the essential lesions of the disease. The history and clinical features of the case were as follows:

J. F., æt. 9, suffered from a patch of lupus on the left cheek of about five years' duration. Advice was sought because the disease was extending. The hereditary history showed a marked proclivity to tuberculosis, five aunts and two cousins having died from tuberculous disease. The percussion note on the apices of the lungs was defective; in other respects the patient's general health and previous history were satisfactory.

The situation and character of the lesions are well shown in Fig. 1. The circumference of the encrusted area was four and one-fourth inches, beyond which there extended a marginal zone of active hyperæmia. There was a marked enlargement of a submaxillary gland underneath the chin on the left side. The treatment adopted was as follows:

1. The part was bathed with hot water in order to
 (a) remove the crusts as far as possible, and
 (b) to stimulate the circulation in the part.

This operation took from five to seven minutes. The removal of the crusts revealed a typical lupoid surface, which was very irregular in character, being deeply pitted at some parts and markedly raised in others, and studded with yellowish nodules, the whole surface showing a tendency to bleed. In the middle of the lower third there was a

small whitish spot which apparently represented an area of central healing.

2. The surface was then carefully dried with a clean piece of white cloth, and thereafter myelocene, previously liquefied and warmed, was applied with a pipette. About one drachm was used, this being applied in relays, the oil being rubbed into the part as thoroughly as the tenderness of the surface would allow.

The patient was treated daily, the treatment being invariably carried out by myself. An immediate improvement was manifested. The peripheral hyperæmia was reduced, the scabs largely disappeared, the surface became smoother both to appearance and to palpation. On the fourth day no bleeding attended treatment. Fig. 2, taken a week after commencement of treatment, shows a marked improvement. All the crusts had disappeared except a small one in the upper and anterior part; the whole surface was deeply congested, with a tendency to scaling; the small, pale area in the lower part was more distinct. The subsequent progress was very satisfactory. The congestion of the surface gradually lessened; the pale area in the lower part extended and a similar pale area appeared in the upper part, the two gradually meeting. Soon the individual tuberculous nodules became visible. The tendency to scaling persisted (see Fig. 3). After thirty-seven days' treatment the improvement was very pronounced, and the patient was exhibited at the July meeting of the Edinburgh Medico-Chirurgical Society. A continuation of the treatment was effectual in bringing the individual tubercle nodules into more marked relief, but the nodules themselves were not apparently influenced. The conclusion was therefore arrived at that the treatment had been effectual in changing the disease from a complicated to a simple form, but that there had been no curative effect on the tuberculous lesions proper. In order to determine the permanency of the improvement of the catarrhal process, all treatment was stopped for two and one-half months, at the end of which time the improvement was found to be fully maintained (see Fig. 4, taken on October 30, 1902).

A second step in treatment was begun on October 30. This consisted in the application of a caustic to each nodule, acid nitrate of mercury being used, and the application being made by a pointed wooden match soaked in the caustic. The local application of myelocene was resumed and continued as formerly, after the preliminary treatment by hot water. One-half of the nodules were treated with the caustic on October 30, the remaining half a fortnight later. The result was very gratifying. The process of healing was remarkably

rapid; the nodules appeared to be completely destroyed. At the end of a month the condition was so satisfactory that the patient was exhibited for the second time at the meeting of the Edinburgh Medico-Chirurgical Society (December 5, 1902). A moderate degree of general congestion was still present over a large area of the affected part. This has gradually disappeared, without treatment, and three and one-half months later the condition was one that may be described as extremely satisfactory (see Fig. 5). There are still present three or four small points that are not above suspicion, although they do not give the distinctive diascopic reaction of lupus nodules; these suspicious points stand out more prominently in the photograph than they do in life. The special features of the result are the entire absence of any cicatricial contraction and the ease and rapidity with which the result was attained. In these and in all other respects the result compares very favorably with even the most recent methods of treatment by photo-therapy.

Remarks.

One of the most striking features in the treatment of this case was the remarkable rapidity of the improvement that took place. It is no exaggeration to say that within twenty-four hours the improvement was very marked indeed; and this was all the more gratifying in view of the fact that the home surroundings of the child as to cleanliness were of the worst possible description. Figure 2 illustrates the degree of change effected by a week's treatment. The scabs have been almost completely removed and are not re-forming; the general surface of the lupus patch has been leveled; the surface is markedly hyperæmic, the congestion obscuring the tubercle nodules; the pale spot in the middle of the lower third of the patch just indicating the tendency to central healing characteristic of the disease. The rate of improvement after this date was not so great, which may perhaps be accounted for by the fact that at this time several experimental observations were made, viz.:

1. For a few days the patient was treated twice daily. The result was not satisfactory, the diseased area showing distinct indications of irritation, which ceased on the resumption of a single daily treatment.

2. Variations were made in the length of time and degree of heat employed for stimulation of the vessels of the part by the hot water. It was found that it was easy to overdo this part of the treatment.

3. Similar variations were made in the use of myelocene, its

temperature on application, and the duration of inunction. Here, again, it was found that harm resulted from excess. Careful daily observation was necessary to determine the exact amount of treatment necessary. The degree of hyperæmia present was taken as the guide.

I have gone into these points in detail more especially because the lessons learned from them confirm the results of similar observations in other skin diseases. They clearly indicate that a failure to get a good result by this method of treatment may in some instances depend on a faulty use of the remedial measures. After three weeks' treatment the enlargement of the submaxillary gland on the affected side had completely disappeared. At this time the surface showed a marked tendency to scaling, as represented in Fig. 3, which also shows how the pale, healthy areas were extending, leaving the tuberculous nodules more sharply defined. A continuation of the treatment at this time led to no further change of note and it became obvious, in terms of our original inquiry, that the treatment had exerted a profound influence in a favorable direction on the pyogenic catarrhal process of the disease, and no apparent influence on the lupus nodules. It was gratifying to note that the improvement was fully maintained after two and one-half months' cessation of treatment.

In connection with the second part of the treatment, the rapidity of the improvement under the influence of the combined measures employed, was equally striking. And it is very satisfactory to note that four months later the improvement has not only been fully maintained, but is actually progressive. Attention has already been drawn to the entire absence of any cicatricial contraction in the part.

While I have not had an opportunity of trying this treatment in other cases of lupus vulgaris, I have had corroborative evidence of its usefulness in some other skin affections, some examples of which have been shown at recent medical meetings. It is not my intention at present to discuss the supposed manner of action of this product of bone marrow; I will content myself with a brief statement of the main points to which I wish to draw attention.

1. The bone marrow contains a substance or substances of distinct therapeutic value in the treatment of some skin affections.

2. The bone marrow employed is not "red marrow," so-called, but the general marrow from the shaft of the long bones. The preparation employed is an etherial extract termed "Myelocene," prepared for the author in the manner dscribed in the *British Medical Journal*, March 20, 1902, by J. F. Macfarlane & Co., Edinburgh.

3. The utmost care is necessary in the selection and preparation

of this substance, and much investigation is yet required before a fully reliable standard preparation is permanently available. Equal care and attention is called for in the local application of myelocene to abraded surfaces.

4. Myelocene is not antiseptic in the ordinary sense of that term; it cannot be applied to an abraded surface in the manner of an ordinary ointment. This difficulty may be overcome by the addition of other substances with known antiseptic properties—*e.g.*, boric acid.

5. A study of the facts here recorded alongside those previously described, suggests that the full elucidation of the problems presented will require combined investigation on the part of physiologists, pathologists, and clinicians, attention being particularly directed to the question of general and local immunity.

DESCRIPTION OF PLATES.—Dr. Chalmers Watson's Article.

Fig. 1. May 23rd, 1903. Before treatment.

Fig. 2. May 30th. After a week's treatment.

Fig. 3. June 13th. After three weeks' treatment. The improvement continued until the mdidle of July, the condition subsequently remaining stationary. Treatment was stopped early in August.

Fig. 4. October 30th. After 2½ months' cessation of treatment. To show that the improvement had been fully maintained. Treatment was now renewed, and continued for 5 weeks.

Fig. 5. March 21st, 1903. After 3½ months' cessation of treatment. The few suspicious points still present appear more prominent in the photograph than they do in life.

PLATE XXV.—To Illustrate Dr. Chalmers Watson's Article.



Fig. 1.



Fig. 2.



Fig. 3.

PLATE XXVI.—To Illustrate Dr. Chalmers Watson's Article.



Fig. 4.



Fig. 5.

SECONDARY ERUPTIONS IN SMALLPOX.

By Jay F. Schamberg, A.B., M.D.,

Professor of Dermatology and Infectious Eruptive Diseases, Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Physician to the Municipal Hospital for Contagious and Infectious Diseases.

ALL writers on smallpox dwell at some length on the occurrence of prodromal variolous rashes. In a certain proportion of cases the true smallpox eruption is preceded by an exanthem which may be morbilliform, scarlatiniform or purpuric in character—or there may be a combination of these forms. These rashes have been so thoroughly described that there is no necessity of making extended reference to them here. Suffice it to say that they appear to be due to the influence of the variolous poison; this view is strengthened by the fact that an analogous roseolous rash occasionally accompanies the full development of the vaccine vesicle.

But there are other eruptions not so well known which commonly occur during the course of variola. During the recent epidemic (1901-1903) of smallpox in this city, I have had the opportunity of studying the cutaneous manifestations in about twenty-three hundred cases of this disease treated in the Municipal Hospital. In this work I have had the valuable counsel of my senior colleague, Dr. Wm. M. Welch, who has treated over seven thousand cases of variola during a period of more than thirty years.

Impetigo Variolosa.

During the period of desiccation and incrustation in smallpox, certain secondary changes commonly occur upon the skin. One of these is the development of sparsely distributed blebs containing a thin, dirty, yellow fluid. These may originate in several distinct ways. They may spring up upon previously healthy inter-pustular areas of skin, or they may result from a direct conversion of the pustules into blebs. At times a pustule is seen one-half of which is still yellowish, while the other half is spreading out into a muddy-colored bleb. The blebs are commonly flat, although at times they rise prominently from the surface; they vary in size from a bean to a walnut. The epidermal roof is flaccid, wrinkled and thin, and easily disposed to rupture, when a thin, yellowish fluid exudes which dries in the form of irregular crusts. This form of bleb formation is most frequently seen on the hands and feet, where they may reach a diameter of an inch or more.

A more common change in the pustules, however, is the develop-

ment around the partially desiccated crust of a *reddish vesicular ring*, containing a turbid, puriform secretion; just beyond the border of the raised-up epidermis is a narrow, pinkish band, which indicates the spreading edge. These flat, bullous patches spread peripherally, lifting up the epidermis as extension takes place, until an area the size of a silver half-dollar is covered. Central crusting proceeds concurrently with centrifugal extension.

In this manner large, dirty yellow, irregular, friable crusts are formed. It is not uncommon for most of the pustules on the trunk and extremities to become surrounded by a spreading vesico-pustular ring, producing an extensive secondary eruption. Nearly all patients with unmodified smallpox present these "sores" upon the skin. Where the eruption is profuse there may be considerable elevation of temperature and other evidences of septicæmia. Indeed, this extensive secondary skin involvement may even cause death.

One of the patients at the Municipal Hospital, a woman, 60 years of age, was apparently recovering from smallpox, when an extensive outbreak of the character described developed and led to a fatal termination. The crusts in this case were numerous and voluminous, and left, after their removal by unguentous applications, large areas of denuded skin.

The various forms of pustulo-bleb formation just described are so common in smallpox that this complicating condition might appropriately be designated *impetigo variolosa*. Indeed, this term was employed by Hebra for one of the forms of bleb formation above referred to. In 1867 he wrote (Hebra: Diseases of the Skin, Translation of the New Sydenham Soc., page 251), "In other instances a consecutive suppuration appears, not round crusts formed from variolous pustules, but in the intervening spaces which were free from the efflorescence. Thus, there appears a second pustular eruption, which might almost be regarded as a second smallpox eruption, were it not that the pustules have a different form, and take a different course. In fact, they resemble rather those of the common pustular affections, and therefore this affection may be called impetigo variolosa." Hebra preceded this description by a reference to "central crusts with small vesicular rings, containing a puriform fluid," to which he applied the name *rupia variolosa*.

Microscopic and cultural examination of the contents of variolous vesicles and pustules demonstrates that the ordinary pyogenic organisms are absent in the early stages of the lesions, but commonly appear during the late pustular period.

In a bacteriological study of the vesicles and pustules of smallpox (Schamberg, Preliminary report of a Study of the Contents of the Vesicles and Pustules of Smallpox, *Jour. Amer. Med. Assn.*, Feb. 14, 1903), the writer found the lesions to be sterile until a late stage of the eruption. Of thirty-four cultures of fluid from variolous lesions before the seventh day of the eruption, thirty-three remained sterile. And even on the eighth, ninth and tenth days, bacteria cultivable on ordinary media are not infrequently absent. Of a total of eighty-two cultures made, 64 or 77 per cent. failed to show any growth whatsoever. Frequently, thick, creamy pus was deposited upon nutrient media, without giving rise to any colonies whatsoever. These results, which are in accord with most (but not all) similar investigations suggest that the *causa causans* of smallpox, which is of course resident in the lesions, is itself pyogenic and that it is responsible for the suppuration of the variolous pock. Suppuration is therefore to be regarded as a part of the normal evolution of the eruption of smallpox. After the eighth or ninth day of the eruption, however, it would appear that a secondary infection with germs commonly present on the skin takes place. At this time variolous impetigo develops. The thin sero-purulent fluid in the impetigo blebs, when examined in smear, is seen to contain myriads of micro-organisms, chiefly streptococci, although staphylococci and a pseudo-diphtheria bacillus are also found. Cultures of this fluid or of the material from the flat impetigo lesion around the variolous crusts invariably give rise to growths of these several organisms alone or combined. Fluid from a large bleb was injected beneath the skin of a dog; in a few days a local tumefaction the size of a walnut developed, which became surmounted by a dime-sized bleb. This ruptured and left a superficial ulceration. The swelling disappeared and recovery occurred without any further local or general symptoms. When death occurs in smallpox, streptococci may, in the vast majority of instances, be recovered from the heart and other internal organisms. Most of the deaths in smallpox occur from septicæmia, from the ninth to the eleventh day of the eruption.

As is well known, the commonest complications of smallpox are boils and subcutaneous abscesses. Seldom does a well-marked case of *variola vera* finish its course without being accompanied by furuncles and phlegmonous infiltrations. I have been impressed with the fact that the tendency to these complications is increased by a pre-existent severe variolous impetigo.

Cutaneous gangrene occasionally occurs during the course of

smallpox; we have observed about a half-dozen such complications in the Municipal Hospital during the recent epidemic. These cases are commonly preceded by an extensive impetigo variolosa. Fig. 4 shows a patch of gangrene on the inside of the thigh in a patient who had a severe impetigo; the extent of the latter eruption is seen in Fig. 3. This patient was desperately ill with septicæmia, but ultimately recovered.

The statement appears to be justified that impetigo variolosa increases the liability to the deeper pyogenic infections, such as boils, abscesses, erysipelas and cutaneous gangrene. It, moreover, appears to bear a relationship in many cases to the development of certain post-variolous rashes presently to be described.

It has been our practice at the Municipal Hospital to give antiseptic baths to smallpox patients during the late suppurative stage of the disease. The patient is immersed for fifteen or twenty minutes in a bath consisting of a 1-10,000 to 1-20,000 solution of corrosive sublimate. In other cases we have employed a 1-500 solution of creolin. After the bath the patient is dusted with weak antiseptic powders. This course of treatment has a most beneficial influence in drying up the impetigo sores and in lessening the tendency to deeper infection.

Secondary Toxic or Septic Rashes.

Another secondary eruption in smallpox, to which but little reference has been made, is the the toxic or septic rash which appears in a certain percentage of cases during the stage of decrustation. Between the sixth and the twentieth days, and most commonly on the thirteenth or fourteenth, there develops upon the trunk, extremities, and at times the face, a peculiar erythematous efflorescence. In most instances the rash consists of a diffuse, dusky, punctuated redness, bearing a strong resemblance to the exanthem of scarlet fever (*Scarlatiniform erythema*). At times it is mottled and inclined to become somewhat morbilliform in appearance. The scarlatiniform eruption is peculiar in that the skin immediately surrounding the drying pocks is often exempted, producing a sort of anæmic halo. The rash lasts for two or three days and then fades away. If the erythema has been well marked, it is prone to be followed by desquamation, which may be profuse in character. The exfoliation of the epidermis is usually rapid and may be out of proportion to the intensity of the rash. Figure 7 shows desquamation of the cuticle of the palms in large masses on the sixth day of the rash. In this patient the eruption was quite indistinguishable from that of scarlatina. In occasional instances a most inordinate and persistent desquamation follows. A young lad

developed on the fourteenth day of the smallpox eruption a severe, deep-red erythema, which was followed by repeated exfoliation of the epidermis. This patient desquamated four or five distinct times, the whole process extending over a period of six or eight weeks. Handfuls of scales could be daily gathered from his bed. The hair of the scalp and eyebrows, and the finger-nails were subsequently lost. A patient recently in the hospital passed through an almost identical attack. Such cases merit the designation of *dermatitis exfoliativa variolosa.*

In rare instances these secondary rashes may become hemorrhagic. Blood extravasation into the skin is most apt to occur upon the lower extremities, where the stasis in the vessels is greater owing to gravity. Fig. 8 represents a purpuric eruption upon the legs in a man who had a well-marked discrete variola. I have seen one severe secondary *purpuric rash* the history of which is of sufficient importance to warrant its presentation:

H. W., an unvaccinated boy of seven and a half years, was admitted to the hospital on September 28, 1901, on the fourth day of the smallpox eruption. The attack was severe, the eruption being semi-confluent. The patient did well for seven or eight days. On the thirteenth day of the eruption, the face, on which the swelling had largely subsided, again became tumefied, the temperature rose and a profuse macular eruption, rapidly becoming purpuric, and consisting of bluish-red pin-head to finger-nail sized ecchymoses, developed over the trunk and extremities. The patient sank rapidly and died in two days.

The secondary rashes are not infrequently accompanied by rise of temperature. The temperature may suddenly mount to 104 deg., decline rapidly and then remain for some days in the neighborhood of 101 deg., or 102 deg. F. In some patients, with rashes of moderate severity, no pyrexial elevation occurs. While the eruption lasts the patients are, as a rule, somnolent, extremely irritable and considerably prostrated. The rashes are more commonly observed in patients who have had severe smallpox eruptions. During the epidemic of 1901-03, we observed these eruptions in at least 5 to 8 per cent. of all the patients admitted. The incidence among children seemed to be greater than among adults. Dr. Welch informs me that in the severe epidemic of smallpox in 1871-72, such rashes were much less frequently observed by him.

The scarlatiniform eruption is the type by far most commonly seen. The resemblance to the rash of scarlet fever is so strong that

in the first cases observed the existence of the latter disease was suspected. In a smallpox hospital in a neighboring town, several patients with scarlatinoid rashes of the character referred to were believed to be suffering from scarlet fever and were promptly isolated. The physician, during a visit to our wards, identified the toxic rashes with the eruption he had observed.

Perhaps some of the cases of scarlet fever associated with smallpox, reported by the older writers, were in reality instances of scarlatiniform erythema.

In a boy recently treated in the hospital, a severe variolous impetigo developed, and this was followed on the fourteenth day of the smallpox eruption by an intense *maculo-papular rash*, which, on the trunk, was quite indistinguishable from *measles;* on the face, however, there was relatively little eruption. The duration of the eruption was brief, and catarrhal symptoms were absent.

The post-variolous rashes are in all probability *septic* or *toxic* in character, due doubtless to the absorption of some poison into the blood. Our experience in the Municipal Hospital would indicate that these are more common in patients who have been the subjects of an abundant impetigo. Considering the fact that the secondary rashes in smallpox have been observed by us in 5 to 8 per cent. of our cases at the Municipal Hospital, the paucity of literature on this complication is rather remarkable. Since penning the above description, the writer has looked up the references to this subject. As far as I have been able to ascertain, none of the modern text-books or monographs on smallpox make mention of these rashes. The earlier writers doubtless regarded the development of the erythema as evidence of an intercurrent scarlet fever, and the numerous instances of the coincidence of these two diseases may thus be accounted for.

Simon (Simon, Ueber Scharlach und Scharlach aehnliche Auschläge im Verlauf der Variola. Archiv. für Dermatologie u. Syphilis, 1873, page 115), in an article on scarlatina and scarlatiniform eruptions in the course of smallpox, carefully distinguishes these two conditions and reports cases representing both true scarlet fever and the secondary erythema which resembles it. In the latter cases he considers the diagnosis of scarlet fever excluded by the date of onset of the complication, the absence of adequate invasive symptoms, the mild character of the angina, the absence of or slight character of the desquamation and the non-contagiousness of the condition. Of thirteen cases of secondary rash observed by Simon, nine developed after the tenth day of the variolous eruption. A few were seen as

PLATE XXVII.—To Illustrate Dr. Jay F. Schamberg's Article.



Fig. 1.



Fig. 2.

Fig. 1. Impetigo variolosa, showing the spreading vesicular ring around the small-pox crusts. Fourteenth day of small-pox eruption.

Fig. 2. Extensive impetigo variolosa on the seventeenth day of the small-pox eruption.



Fig. 3.



Fig. 4.

Fig. 3. Gangrene of skin occurring on the thigh of patient with impetigo variolosa on the eighteenth day of the small-pox eruption.

Fig. 4. Extensive impetigo variolosa involving more particularly the legs.

PLATE XXIX.—To Illustrate Dr. Jay F. Schamberg's Article.



Fig. 5.



Fig. 6.

Fig. 5. Exfoliative dermatitis occurring during the course of variola. Loss of hair and nails.

Fig. 6. Back of patient shown in Fig. 5.

PLATE XXX.—To Illustrate Dr. Jay F. Schamberg's Article.





Fig. 7. Exfoliation of palmar epidermis following a scarlatiniform eruption occurring on the sixteenth day of small-pox. Desquamation here shown, occurred six days after the appearance of secondary exanthem.

Fig. 8. Secondary purpuric rash on the eighteenth day of small-pox. Rash almost limited to the lower extremities.

early as the sixth day and as late as the eighteenth or twentieth day. Simon does not seem to have encountered the profuse desquamation which has occurred in some of our cases. No mention is made by him of morbilliform rashes. According to Simon, Fleischmann observed similar cases, as did likewise Bernouilli, who states that in 1865 he saw a case of secondary erythema in variola which he erroneously regarded as an intercurrent attack of scarlet fever.

The only other reference to these rashes that I have been able to find is by Meredith Richards, Medical Officer of Health, of Chesterfield (Richards: Accidental Rashes Occurring in the Course of the Exanthemata. *Quarterly Medical Journal*, 1896, page 31). This writer refers also to the bullous and pustular eruptions occurring late in the course of variola. He says:

"Less known, and from a practical point of view less important, are certain post-eruptive rashes, which include (1) a scarlatiniform erythema, general in distribution and not differing from that common in various septic states, (2) a development of the smallpox pustules which appears to correspond to what Dr. Crocker has recently described as 'impetigo contagiosa gyrata.' The smallpox pustules, instead of drying up and scabbing on the eleventh day, show signs of spreading peripherally, so that in a day or two many of the lesions consist of three well-defined parts, viz., a central scab, a surrounding vesicular ring which rapidly becomes pustular, and a red areola surrounding the pustular ring. Unless treated, the areola and pustular ring continue to spread centrifugally until the whole lesion may measure an inch or more in diameter. When abundant, this rash gives rise to a very remarkable appearance, and is clinically important because it is often attended by high temperature and other signs of septicæmia. There is no doubt that this is due to a mixed infection, as it has a tendency to occur in particular wards and may be accidentally acquired by attendants. It also merits notice in passing, as, I believe, this variety of secondary infection has not been fully described. (3) Accompanying the previous rash or occurring in other cases exhibiting signs of septicæmia, it is not infrequent to observe cases in which the healthy inter-pustular epidermis is raised into flaccid bullæ, containing a few drops of foul muco-purulent fluid. These bullæ are soon followed by profuse desquamation, which may lead to the shedding of the nails, and are accompanied by severe constitutional symptoms of a septicæmic character. Many of them are fatal, though a good proportion appear to owe their lives to boracic baths combined with good nursing and general tonic treatment."

SOCIETY TRANSACTIONS.

CHICAGO DERMATOLOGICAL SOCIETY.*

Dr. James Nevins Hyde, President.

At the meetings of January and February the following cases were presented:

Case 1.—Comedones on Face of Infant Eight Months of Age. Presented by Dr. Hyde.

The comedones in this case were perfectly typical and had been present since the third week of life. History was also given of "corns" being present on the toes at birth, these having disappeared. The child was otherwise quite normal and healthy.

Case 2.—Diffuse Pigmentation of Skin, with Tumor Formation Complicating Dislocated Spleen. Presented by Dr. J. Clarence Webster (by invitation).

The pigmentation in this case (a woman, married, 45 years old) was diffused and generalized, being most marked on the face and trunk. In character it varied from chloasma-like patches to small macular spots, and in color from light to very dark brown. It had been present for eighteen years and began to appear coincident with a "tumor" in the right lower abdomen. This upon cœliotomy proved to be a dislocated spleen which was removed, at which time a chronic inflammatory condition of all of the abdominal viscera was also discovered. The pigmentation began to improve soon after the operation and is at present fading quite rapidly. The multiple tumors of the skin are clinically and microscopically molluscum fibrosum.

Case 3.—Tuberculosis of Face. Showing Result of X-ray Treatment. Presented by Dr. Pardee.

This case is of four years' standing and began as a small elevated papulo-pustule, which rapidly ulcerated and spread, covering the entire

*The Chicago Dermatological Society was organized in February, 1901, with its avowed object, "the cultivation of Dermatology in all its branches." The membership at present consists of: Dr. James Nevins Hyde, President; Dr. Joseph Zeisler, Vice-President; Dr. Lucius C. Pardee, Secretary and Treasurer; Dr. William Allen Pusey, Dr. Henry G. Anthony, Dr. Frank Hugh Montgomery, Dr. O. S. Ormsby, Dr. William L. Baum, Dr. L. Blake Baldwin, Dr. L. E. Schmidt, Dr. R. D. MacArthur, Dr. Alfred Schalek, Dr. R. R. Campbell, Dr. David Lieberthal, Dr. E. A. Fischkin. Meetings are held once every month except during the summer, and are purely clinical and the discussions informal. Special meetings to which out-of-town dermatologists are invited are held at irregular intervals. At the last special meeting Dr. Frank of Milwaukee, Dr. Heidingsfeld of Cincinnati and Dr. Foster of St. Paul were present.

cheek when the case was first observed. The patient, a boy of 14 years of age, gives no tubercular history either family or personal, and is at present in fair health and growing rapidly. Microscopical sections of the lesion showed typical tubercular structures. The exposures to the Roentgen ray have been made regularly for varying periods and at present smooth, white scar tissue, containing a few brownish nodules suggestive of lupus vulgaris, occupies the site of the former ulcer. No spreading at the edge was noted after treatment was started.

Case 4.—Keloid Following Vaccination Scar. Presented by Dr. Hyde.

The patient, a white boy of 12 years of age, showed a typical keloidal scar at the site of vaccination. The point of interest in this case was that the mother and aunt both had keloid formations on the breast, which had appeared, as far as history could be made to show, without antecedent trauma. The patient showed also a marked hypertrichosis of the arms and legs.

Case 5.—Blastomycosis of Face. Presented by Dr. Pusey.

The patient in this case was a farmer in good health. The lesion appeared three months previous to his appearance for treatment, on the left cheek and lower eyelid. It is now of the size of a half dollar. Cultures show a typical growth of Blastomyces.

Case 6.—Dermatitis Herpetiformis. Presented by Dr. Schmidt.

The patient, a man 45 years of age, exhibited an eruption distributed most thickly over the extensor surfaces of the legs and back, with scattered lesions on the arms, chest and flexor surfaces. The lesions, which occurred acutely, were preceded by itching. They were of a papulo-vesicular character, with a tendency to form groups, especially on the gluteal region and backs of legs. No history of previous eruption was given. Itching, before treatment was begun, was intolerable, but disappeared to a great extent soon afterward.

Case 7.—Keloid of Back Following Acne Vulgaris. Presented by Dr. Fischkin.

This patient was a Russian Jew, 60 years of age, who denied any acne or other eruption on the affected regions. Numerous typical keloidal scars were to be seen over the shoulders and back.

Case 8.—Grouped Miliary Syphilide Limited to Face. Presented by Dr. Hyde.

Absolutely no history of infection nor trace of a chancre could be obtained in this case. The eruption was the first that had been noted and was quite typical in character, except as to location. The patient, a young man, 24 years of age, acknowledged suspicious intercourse, but was unaware of infection until the present eruption occurred.

Case 9.—Staphylococcic Infection of Hair Follicles. Presented by Dr. Baum.

This case, with the exception of its distribution, resembled a case of sycosis vulgaris. It occurred in a man about 35 years of age. The hairs of the beard, at the edges of the scalp, the pubes, axillæ, and some of the hairs on the limbs and trunk were affected. History of the beginning of the eruption dated back to childhood. Cultures showed a growth of the staphylococcus albus.

Case 10.—Lichen Planus. Presented by Dr. Fischkin.

This was a typical case of lichen planus in a woman 50 years of age. No unusual points of interest were shown.

Case 11.—Psoriasis Which Began as a "Weeping Eruption." Presented by Dr. Anthony.

The unusual feature in this case was its onset as what appeared to be a weeping eczema. At present the eruption is typical psoriasis.

Case 12.—Pityriasis Rubra Pilaris (Devergie). Presented by Dr. Baldwin.

The history of this case dates back eight years from the present time, during which period little change has occurred. The eruption is practically universal and appears as a reddened harsh condition of the skin, covered with a branny desquamation. The natural lines of the skin are much accentuated and a few lichenoid papules are to be found, especially upon the inner surfaces of the legs and thighs. The patient is a young man, about 30 years of age, and in robust health, with the exception of the skin symptoms. He has been under observation ever since the eruption occurred and many forms of treatment have been attempted with only temporary benefit.

Case 13.—Multiple Benign Epithelomata of Face. Presented by Dr. Pusey.

This case was of unusual interest in several respects. The patient was a woman, unmarried, 45 years of age, in whom the disease had existed since puberty. It had gradually grown worse until her thirtieth year, since which time it has remained stationary. The lesions were very abundant on the face, especially on the lower portion, and a few were found elsewhere. The patient's father and younger sister also have lesions of the same character.

Case 14.—Blastomycosis of Face and Leg, Showing Result of Treatment. Presented by Dr. Ormsby.

This case presented no lesions by which a diagnosis could be made at this time, as it had been under treatment for some time and was greatly improved, according to previous history.

Case 15.—Case of Multiple Verruca and Lipomata. Presented by Dr. Hyde.

The patient in this case was a boy 14 years of age. He exhibited at presentation an ordinary dermatitis hiemalis of the face, which partly covered a more chronic flat papular eruption which had been present for three years. The lesions were nearly colorless, flat and shiny papules, and some of them showed slight umbilication. No similar lesions were found elsewhere. No definite conclusion was reached regarding the diagnosis.

Case 16.—Case for Diagnosis.

The patient, a man 60 years of age, gave the history of many warts since boyhood, but in the last few years their number had greatly increased. Innumerable warts of all kinds were found over the body. They were for the most part typical papillomata, pedunculated and sessile, and sebaceous warts; in addition, a large number of tetangiectatic warts were to be seen. Many lipomata of the skin, some of long duration and others of recent origin, were to be seen on the limbs and trunk.

Case 17.—Ulcerating Tubercular Syphilide.

Presented by Dr. Fischkin.

No unusual points of interest were shown in this case.

Case 18.—Tuberculosis of Stump of Amputated Arm. Presented by Dr. Hyde.

The interesting feature in this case was the evident value of the X-ray treatment in the treatment of superficial tuberculosis. No typical lesions were present, as these had disappeared under treatment, avoiding the necessity of further amputation, which had been suggested as the only course.

Case 19.—Case for Diagnosis. Presented by Dr. Pusey.

A young girl, 18 years of age, exhibited upon the left cheek irregular inflammatory scar tissue covering an area of 1 to 3 cm. in diameter. As the lesion had been operated upon and X-ray treatment given, no definite conclusion could be arrived at as to diagnosis. History points to a tubercular-like formation at an earlier date. An acute, hemorrhagic, zoster-like eruption had occurred on the face after the X-ray treatment was started, but this also had nearly disappeared.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

310th Regular Meeting, Held January 27, 1903.

The President, Dr. Oscar H. Holder, in the Chair.

A Case for Diagnosis. Presented by Dr. George Henry Fox.

Emma W., aged 6 years. The patient is very delicate and is small for her age. Has a good appetite and sleeps well. She has seven brothers and sisters in good health and well developed. There is a slight hemiatrophy of face, right side. The teeth are imperfectly developed. The inner condyle of right femur is enlarged as is the right internal malleolus. Several finger nails are wanting, and the left middle finger is shortened and its first and second phalanges are fused. There is an oblique scar from base of right index finger across the hand. There is some ulceration of the gums. The eruption is an unusual one; its chief characteristic being bright blood red, not marginate, patches, which on disappearing leave brownish stains or atrophic spots. The patches are composed of capillary dilatations, and their color can be pressed out of them, but slowly returns when the pressure is removed. Some of the angiomata seem to become scaly, ulcerate, a crust forms, and from beneath the crust pus can be pressed out. The eruption is chiefly located over the lower part of body and legs. Down the left forearm along the ulnar bone there is a red line. On the right arm there are yellowish, slightly atrophic lines, which were apparently red at one time. Some of the patches of the left hip and thigh are being transformed into cicatrices, resembling ulcerations from burns. On the cheeks there are faint angiomata.

Dr. H. H. Whitehouse: I think this is one of those cases which we cannot classify in the dermatological field. It is probably a congenital atrophic disturbance affecting the bones and other organs, as well as the skin. There are certain angiomatous spots and atrophy. I consider it a very unique case.

Dr. E. B. Bronson thought it should be classed with the congenital dystrophies of the skin. With regard to angioma being the primary element, there seemed to him to be some doubt. Such telangiectases as appeared in this case sometimes occurred secondarily in certain affections of the skin, the result of local paresis of the blood vessels, with a permanent dilatation. Such effects were sometimes seen after X-ray burns.

Dr. Charles W. Allen: Some of the lines and rounded areas of hardened white tissue suggest morphea. It may be a central nerve affection.

Dr. Hermann G. Klotz: I cannot make a diagnosis, but I wish to call attention to the fact that the child shows distinct signs of destructive processes in the bones and joints of the fingers, which point to the pres-

ence of some chronic infectious disease like tuberculosis or syphilis. The general cachexia seems to be due to such an infectious disease.

Dr. George Henry Fox believed that the condition of the teeth and nails are a part of the general dystrophy; the condition of the finger, he believed, may be accidental and apart from the disease. The primary lesion was a telangiectetic condition which preceded the atrophy in every spot. There were one or two spots where the redness and injection of the vessels had become prominent; finally a patch was produced, ulceration took place, which was followed by a thick crust.

A Case of Lichen Rubra. Presented by Dr. George Henry Fox.

This patient was seen by you September 25 and all agreed that she presented a typical instance of lichen ruber, with the characteristic eruption on the hands, above the elbow, back of neck, etc. During the last month the eruption has changed to a typical lichen planus. The eruption presented by this woman to-night looks like lichen planus. There is a central umbilication and other features of the disease well marked. Since you last saw her her general condition has improved. Her arms are now nearly free from trouble. The eruption, as you can see, on the chest consists of flattened papules typical of lichen planus and, at the same time, we can see some areas of eczema.

Dr. A. R. Robinson: If I saw the lesions and interpreted them correctly with the night light, I must say that I fail to see any classical or characteristic lesions of lichen planus. The lesions were more or less formed, with flattened surface and with slight umbilication. In almost all inflammatory conditions of the skin we may have just such fields well shown, and that is what I regard as the case here with the peculiar shaped lesions. Nothing here presented would suggest to me the diagnosis of lichen planus without a further study of the case.

Dr. Charles W. Allen: The point raised is an important one. It would be remarkable if this should turn out to be a pronounced case of lichen planus. The majority of the lesions here are inflammatory and, to me, suggest an eczema rather than lichen planus. Still there are two lesions near together with a lichen planus summit, which somewhat suggest the latter affection; but, if there were no other lesions but those on the body, I could not make this diagnosis.

Dr. Bronson would not dispute the statement made by Dr. Fox that lichen planus lesions had been present, and that the appearance had changed since. Certainly at the present time there were no very characteristic signs of lichen planus, the lesions appearing of a simple irritation type. But he thought it nothing very extraordinary that occasionally there should be a coincidence in the same patient of lichen planus and lichen ruber lesions and such an isolated case by no means proved that the diseases were identical.

Dr. George Henry Fox: I still maintain the view that I have always held that there is no relationship between lichen ruber and lichen planus. Clinically I do believe that sometimes there may be lesions in lichen ruber, the flattened ones especially, which look like lichen planus lesions. We have seen in eczema angular, smooth lesions which look like lichen planus even in color. In this case presented to-night two weeks ago there was an acute eruption, with flattened lesions, which looked like lichen planus eruption; if lichen planus eruption appeared elsewhere I would say absolutely that it was a part of the same disease. An acute dermatitis may occur in any case of lichen ruber and may resemble lichen planus.

A Case of Obstinate Psoriasis. Presented by Dr. George Henry Fox.

This case was treated with the X-ray. It was one of the most obstinate cases of psoriasis of the palms and other portions of the body. Twenty per cent. chrysarobin ointment was not productive of good results, while pyrogallol worked well. The palms were covered with a diffused keratosis, but no application affected it. The patient is now nearly well. The left forearm, which was badly burned by the X-ray, still shows psoriatic patches—more than on the right arm—but the left palm is perfectly well, while the right one is still rough, though greatly improved by the pyrogallol.

Dr. Samuel Sherwell: We all recognize the great, and sometimes wonderful effect of treatment by X-rays in stubborn cases; still I do not think that ordinary medical and local treatment had been exhausted in this case by any means. I am sorry that a therapeutic suggestion of my own, made when the patient was last shown to the Society, was not used in this case. I think the effect would have been quite as good, if not better, judging from its analogy to another case which has lately been in my hands, and in which spite of its obstinacy under the care of two or three of the gentlemen present, was very obstinate. There is almost always in these recalcitritant cases some one remedy or combination which will act; so it proved in the one I quote. It had naturally received most intelligent treatment, but finally and in relatively short time got entirely well on antirheumatic constitutional treatment, combined with vigorous application of the alkalies and tar, in shape of the Liquor Carbonis detergens. He remains well and there seems to be no tendency to recurrence; he still, however, uses the constitutional remedy at intervals.

Dr. P. A. Morrow: I think that the result of treatment in certain cases of psoriasis is quite surprising at times. We all recognize the fact that there is sometimes a spontaneous tendency toward improvement. I think the effect of the X-ray would be more convincing if it had been applied to both palms in this case presented to-night. I recall a case that was treated by the X-ray without the slightest effect, but it disappeared entirely under the use of chrysarobin and pyrogallol and other remedies, including the use of the mercurial plaster.

Dr. E. B. Bronson: I can recall the instance of a young lady who had arthritis deformans and the worst case of psoriasis that I ever saw in those occupying the higher walks of life. I worked over her for months without any progress at all. Chrysarobin finally proved effectual. She went to Iowa, and I think this simple change of environment helped in her recovery.

Dr. Charles W. Allen: We see a number of skin conditions that improve after a considerable dermatitis has been produced. Personally I try to avoid burns in these cases. I do not know if such an effect is ever intentionally produced. I have just had an instructive experience with an X-ray burn in a case of cancer of the liver, i. e., so far as the clinicians were able to make the diagnosis, there being a very large hard mass occupying the site of the liver. Accidentally, a burn of the abdomen was produced by my assistant. He was using at the time the static machine. Although we were obliged to suspend treatment for at least six weeks there was a marked decrease in the size of the tumor until now it is not more than one-third its original size. The burn has healed with the exception of an area about the size ofa twenty-five-cent piece, which until now has refused to heal. The cicatrix suggests an atrophic condition of the skin with telangiectic vessels in scattered patches and the scar is exceedingly tender and painful. In the case of psoriasis presented tonight the treatment was applied vigorously, and a dermatitis was set up, but the result is very satisfactory.

Dr. George Henry Fox: In this case I ordered the use of pyrogallol upon the legs and one arm. One night I was sent for and found the patient with pyrogallol poisoning, with a rapid pulse, nausea, intense dyspnœa, etc., and it required a week or ten days for her to recover from the effects of the drug. I think we should use pyrogallol cautiously when treating psoriasis which involves a large extent of surface.

Dr. Charles W. Allen: Shortly after I became a member of this society I read a paper on the use of pyrogallol in psoriasis, mentioning its value and dangers. I pointed out that it was dangerous, having had poisonous effects in two cases and I have always believed that this drug should be used with great caution.

A Case of Prurigo. Presented by Dr. George Henry Fox.

I wish to present a typical case of prurigo which you saw two months ago. At first the patient was under the sulphur ointment and this was followed by a three per cent. ichthyol ointment and, as you see, the skin is in fine condition.

Dr. Charles T. Dade: I remember a case seen at the Vanderbilt Clinic which yielded to the sulphur ointment; but year after year the patient returns with the same trouble.

Dr. Oscar H. Holder: I saw a case at Randall's Island Hospital

which had been under sulphur ointment for some time but which did not improve any. This patient had been afflicted with prurigo from birth. I should like to ask Dr. Fox if his patient dated the trouble from birth?

Dr. George Henry Fox: Yes.

A Case of Exfoliatio Areata Linguæ with Distrophy of Nails in a Syphilitic. Presented by Dr. A. D. Mewborn.

History of case: J. F., aged 22 years, born in Germany, occupation, picture-frame maker.

Fam. Hist.: Father died when patient was two years old. Cause of death unknown. Mother living and in perfect health, patient is the only child. Can give no history of other relatives. Came to the U. S. when two years old.

Previous history: Had measles when young. Venereal history commenced two years ago with a gonorrhœa which lasted only four weeks. In July, 1901, contracted a hard chancre behind the corona glandis near the frenum. He denies ever having had an eruption on his body. Four or five weeks after the appearance of the sore on the penis he first noticed the present condition of the tongue. About this time there was a general thinning out of the hair and a splitting and a peeling off of the thumb nails.

Physical Exam.: Pale and slightly emaciated. Heart and lungs neg. Slight enlargement of the inguinal glands. Hair scanty.

Nails: Left hand, thumb-nail concave, longitudinally ridged with split edges. Other nails ridged and split at the edges. Right hand, thumb alone affected as above described.

Tongue: Hypertrophied and brownish colored papillæ in the center. Around the margin of the tongue are irregularly shaped areas of a shiny red color almost devoid of papillæ. These patches of denudation are separated from each other by slightly elevated whitish ridges of a circinate contour. There are a number of fissures in the tongue.

The only symptoms referable to tongue are slight burning at times from acids or hot drinks. Patches seem to change contour, fade away in one part to reappear in another.

Dr. Charles W. Allen: I am glad to hear Dr. Mewborn use the designation exfoliatio areata linguæ for this condition. If the name was not invented by me it is the one I chose for the condition a number of years ago, when I did some writing upon tongue affections. It certainly is the term I prefer. A great many names have been applied to this condition.

That this disease occurs in syphilitic subjects is not surprising, since both are frequent. Parrot and Hutchinson made the mistake in believing that because seen in syphilitic children it was a manifestation of syphilis. It is also seen in children with ringworm. Kinnear thought that it was a true ringworm of the tongue because it was seen in children with ring-

worm of the skin and scalp. It has nothing to do with either syphilis or ringworm. I have seen it in adults and in children with various skin diseases, and have presented to this society patients with skin disease who presented this *lingua geographica*. I have seen it occur in a whole family of children numbering, I believe, as high as five in one instance. Just what is the cause is not known, but it surely has nothing to do with syphilis. Being practically harmless, it is scarcely necessary to treat it. It rarely gives rise to subjective symptoms. A denuded area may become red and irritated from other causes and so give rise to complaint and call for treatment.

Dr. Herrman Klotz: I do not think this condition of the tongue has anything to do with syphilis. We should be careful in treating syphilitics with this affection, because the treatment may make the condition worse, especially when mercury is being used.

Dr. A. R. Robinson: I have seen this condition occurring so often in children and in adults that I have regarded it as having to do with some derangement of digestion, usually an acid indigestion and consequently a desquamative glossitis. The mouth shows a follicular stomatitis and desquamative stomatitis, which is always associated with indigestion.

Dr. James N. Winfield: I like the use of Lugol's solution in these cases. I believe that mercury in any form will increase the tongue condition. This trouble does not seem to depend upon syphilis, but is usually associated with some gastric or intestinal derangement.

Dr. Sherwell: The affection under which Dr. Mewborn classes this case he presents is certainly a curious one, and ordinarily affects the general health but little. In children I usually find it concurring with some gastric or intestinal trouble, and usually the remedy I give is a little (fractional) dose of hydrarg. c creta, with bismuth sub-carb. and sugar of milk sprinkled dry on tongue at night, etc. That seems to act well. In the present case I hardly know what to say, but think I would try in virtue of his history a dilution of acid nitrate of mercury, say in five per cent strength or stronger. I think it would act well.

Dr. Prince A. Morrow: I agree with the statement that this condition often occurs independently of syphilis, although in this case I am inclined to regard it as a manifestation of syphilis, for it did not appear until after inoculation with syphilis. There are certain peculiarities differing from ordinary desquamative glossitis. I have had a number of cases under observation without any suspicion of syphilis; the objective appearances are different. I have, at the present time, two patients under observation, and both have simple desquamative areas destitute of papillæ. Smooth round patches, possibly three or four, which increase in area and gradually coalesce and cover the entire tongue. The process has been repeated a number of times. In this particular case there is marked induration around the margin of the lesion. Occurring, as it does, in a syphilitic

subject, I should look upon it as a syphilitic element. With regard to treatment I think that any strong irritant treatment would make the condition worse. I believe an alkaline wash will certainly relieve the sensitiveness. So far as specific treatment is concerned we all recognize that most specific lesions of the tongue are not markedly influenced by the internal use of mercury or iodide of potassium. I think the general effect of mercury in this particular case would be of benefit. I never rely upon internal treatment alone to cure specific lesions of the tongue, for I think they will disappear more promptly under the influence of local treatment.

Dr. H. H. Whitehouse: I believe with Dr. Allen that this condition occurs more frequently in those not syphilitic; I have never seen it in a syphilitic subject. As this has occurred in one who has a syphilitic history I would regard it as possibly and probably a part of the syphilitic process.

Dr. Bronson was disposed to differ from some of the opinions expressed with regard to the relations of the disease in the case presented with the so-called desquamative glossitis of the tongue. It seemed to him the latter disease had very different features. It was not a very uncommon affection and was easily recognized by its red slightly eroded surface with swollen papillæ, without infiltration or ulceration, its circumscribed borders with a line of thickened opaline epithelium surrounding it. In the present case there was a distinct infiltration at the side of the tongue, without ulceration to be sure, but the absence of this was not necessarily evidence of a non-syphilitic character. It occurred near the borders of the teeth which were imperfect, and where syphilitic infiltrations very commonly occur. Rather deep clefts occurred in the tongue surrounding the infiltration which would not occur in simple disquamative glossitis and often did occur in the syphilitic tongue. He had sometimes seen a thickened hypertrophic condition of the mucous membrane along the side of the tongue and due to rough or sharp edges of bad teeth, without syphilis, but the conditions bore very little resemblance to typical desquamative glossitis or so-called geographical tongue.

Dr. A. D. Mewborn: The patient states that some of these patches will disappear and then recur again in a few days. One of these patches may recur in the centre of the old field and then spread toward the circumference. The papillæ did not seem to be denuded entirely, but only the superficial layers of the epithelium desquamated, leaving reddened areas. In connection with this case I was struck by the simultaneous appearance of marked trophic changes in the nails of both hands, i. e., splitting and thinning with longitudinal ridging.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

311th Regular Meeting, February 24, 1903.

H. H. Whitehouse, M. D., Chairman pro tem.

A Case for Diagnosis. Presented by Dr. G. H. Fox.

The man had been in the New York Skin and Cancer Hospital some months ago, at which time the eruption on the face and head was of a pustulo-nodular variety. There was less pus at the present time, and some of the nodules had diminished under recent treatment with the X-ray. The affection began about one year ago, and had been serpiginous in its course.

Dr. J. A. Fordyce said that it was probably a case of pyogenic infection, but it was futile to attempt to make a diagnosis without bacteriological investigation.

Dr. J. C. Johnson coincided in the general view expressed by Dr. Fordyce, but did not think that the organism responsible for the condition was necessarily one of the pus organisms. The infective agent might be a fungus.

A Case for Diagnosis. Presented by Dr. H. G. Piffard.

The patient was a man presenting areas of atrophy on the skin of the face.

Dr. Fox said that he had no doubt the case was one of lupus erythematosus, and Drs. Johnson, Fordyce, Dade, Klotz, Allen, Sherwell and Jackson concurred in this diagnosis.

Dr. Piffard said that his own diagnosis was lupus erythematosus, but the case was interesting because there had never been anything about it to suggest erythema. He had seen a number of similar cases. He would treat this one by the ultra-violet ray.

A Case of Xanthoma Diabeticorum. Presented by Dr. Fox.

The patient is a married woman 28 years of age. Her menstrual periods are regular, and somewhat profuse, has never been pregnant. Her general condition has been fairly good. She is subject to bilious attacks, becoming somewhat jaundiced at times. Two years ago she was ill for two weeks with what was called malarial fever. At the same time she had a severe attack of jaundice.

The eruption, for the treatment of which she came to the Vanderbilt Clinic, appeared six years ago and has been gradually spreading.

Present condition: The patient is thin. She says she has been growing thin for the past two months. She says that she is thirsty all the time and her tongue shows a surface that is "worm eaten."

About the eyes, on both upper and lower lids, there are several well-

marked, typical yellow xanthoma patches. On the arms, specially on the flexor surfaces, trunk and over the abdomen, there is a diffuse papular eruption that for the most part is of the color of the skin, but when looked at from above has a slightly yellow hue. The eruption is lacking in the reddish hue so often seen in xanthoma diabeticorum, and without the xanthomas of the eyelids one would hardly think at first of xanthoma diabeticorum. The distribution of the eruption rather suggests lichen planus, but the absence of the violaceous color, itching, scales and gray striation bars out that diagnosis.

The urine was examined by Fraser & Co. and was found to contain 9 3-10 per cent. of sugar, and had a specific gravity of 1044.

Dr. P. A. Morrow remarked that xanthoma of the eyelid was not considered a common feature of xanthoma diabeticorum.

Dr. Fox said that the lesions on the eyelids were not the ordinary xanthoma planum, but were quite similar to the nodules on the body—a condition which he had never seen upon the eyelids.

Dr. A. R. Robinson said he did not recall any case in which lesions on the eyelids had been seen in connection with xanthoma diabeticorum. The lesions on this patient's arm were so small that they could not be well seen by artificial light, and hence he would be disposed to hold the diagnosis in abeyance for the present.

Dr. C. W. Allen said that the plain variety of xanthoma upon the lids could occur in diabetic subjects, even along with other lesions upon the trunk—the so-called xanthoma diabeticorum.

Dr. S. Sherwell said that he agreed with Dr. Robinson that if this were really a case of xanthoma diabeticorum it must be a unique one, because of the lesions present on the eyelids, which, as far as he remembered, had always been absent in cases reported.

Dr. Johnston said that he would not be willing to make a diagnosis of xanthoma diabeticorum from an examination only of the lesions on the forearm; certainly the appearance presented did not resemble that of certain cases which he had followed most carefully. For example, there was no redness of the lesions. Cases of diabetic xanthoma have, however, been reported with lesions not only of the lids but of the palms as well.

Dr. Fox said that certainly the lesions upon the arm would not lead one to make a diagnosis of xanthoma diabeticorum, but if one had an opportunity of examining the lesions upon the trunk by daylight there would be no hesitation in making that diagnosis.

A Case of Lupus Erythematosus Involving the Mucous Membrane of the Lip. Presented by Dr. C. W. Allen.

The patient was a man in whom the eruption had begun five years ago on the lower lip, and had extended over the vermillion border to invade the mucous membrane of the mouth. It also involved the margins

of the lid of one eye. The various patches had been decidedly benefited by the X-ray. Attention was called again to the advantage of curetting the border of the patch as a means of limiting the disease. This had been done in this case, and a photograph was presented, taken just after the curetting. Lupus erythematosus, he said, could not be properly curetted by scraping down upon it, but one must go underneath. He believed that he was the first to carry out this plan and to call the attention of this society to the importance of this mode of treatment.

Dr. Fox said that he had reported a case in which the erythematous lupus extended on the inside of the lip, into the oral cavity and even to the pharynx.

Dr. S. Sherwell said he had seen a case in which the disease being on face and lips extended not only into the pharynx, but into the larynx and trachea, the lesions ever lessening in intensity and could be seen, with the aid of the mirror, in the primary divisions of the bronchi. He thought at the time the case was one of common lupus. It began on the face, and extended into the mouth and pharynx. It destroyed a segment of the epiglottis. Dr. Sherwell removed the tonsils, which in this pathological process had become markedly enlarged, and experienced one of the most severe and dangerous hemorrhages that he had observed after tonsillotomy. The girl had been observed for a number of years, when last seen was a woman, and had remained in good health. The case at the time was presented at a section meeting of the New York Laryngological Society.

Dr. H. H. Whitehouse thought these cases were very uncommon. He was interested in the suggestion regarding the curettage of the border, and would like to hear further on this point.

Dr. H. G. Piffard said that he believed about twenty years ago he had published in the Charleston Medical Journal a communication in which he stated that the spreading of a lupus erythematosus could be checked by the destruction of the margins by means of the actual cautery. The application must be thorough, or it would not accomplish the desired object. He saw no objection to the curetting, yet he had found the cautery knife satisfactory and effective.

Dr. Allen said he had mentioned this treatment by the curette in this society before, and it had seemed to be new to the members at that time. When the disease was spreading this treatment offered a decided barrier to the disease, and he believed it to be curative as far as it went. Contrary to the generally accepted view, if one passed the curette underneath the outer verrucous surface it was found that the tissue was not so hard and firm as appeared from the outside.

A Case of Syphilis from Ritual Circumcision.

Presented by Dr. Morrow.

There was a large induration occupying almost the entire circumfer-

ence of the glans penis and extending down upon the body of that organ. It appeared just four weeks after ritual circumcision had been performed. When first seen, four weeks ago, the body of the infant was covered with the eruption, and a number of glands in the vicinity were enlarged.

A Case of Lepra. Presented by Dr. J. A. Fordyce.

The patient, a man twenty-four years old, is a barber by occupation. He resides in Brooklyn. He has six brothers and one sister, all of whom are well. The patient was born while his parents were on a visit to the United States, but he went to Brazil when three years old and remained there for six years. All the other children in the family were born in Brazil.

He thinks his present trouble began about two years ago. The first thing that attracted his attention was a "bloodshot" condition of his eyes. Later he noticed changes in the color of his skin over his face and upper extremities. He now has small leprous nodules on the face, trunk, extremities and a leprous infiltration surrounding the sclero-corneal juncture of both eyes. Both ulnar nerves are thickened and marked anæsthesia is present over the forearms.

Dr. A. D. Mewborn demonstrated the lepra bacilli from the nasal secretion. They were stained by carbol-fuchsin a brilliant red. Bacilli were very numerous and were in clusters resembling "bunches of cigars" as well as singly.

Dr. P. A. Morrow commented upon the extreme frequency with which these cases were observed in this city now, as compared with former years. He thought there was an undoubted tendency for this disease to spread in this country. In 1889 he had presented to the American Dermatological Association a picture of a patient, showing considerable surface involved in an eruption extending over the instep and over the ankle, and a dozen or more patches on various parts of the body. That patient had been sent to him by Dr. Besnier, of Paris, and had been under the speaker's treatment for several years. He had seen her the other day for the first time for many years. When first seen the patch which he had described was absolutely anæsthetic, as were also other patches on the body. There was also enlargement of the peroneal and ulnar nerves, but all of them eventually cleared up, and he looked upon the case as cured. She now stated that there had not been the slightest symptom of the disease for the past five years. He had always been under the impression that the patches which were characteristic of anæsthetic form of the disease were permanent, in contrast with the tubercular manifestations, which were more or less evanescent and changing. He was, therefore, surprised to find that there was not a trace of these patches upon any portion of the body. The skin appeared to be normal, as was also the sensation. With this long period of quiescence and free-

dom from any sign of the disease he thought this patient could be considered cured. He mentioned the case because the opinion was almost universal that these cases sooner or later progressed to a fatal termination.

Dr. Mewborn said with regard to the bacilli found in the abundant nasal secretion from this case that the question might arise, Was not this secretion liable to communicate the disease? These bacilli had never been cultivated, and about all that was known about them was their staining reaction. In a recent article by Ivanow (Annales de L'Institut Pasteur, October, 1902) it had been stated that sections of leprous nodules which had been kept in alcohol for at least three years had been inoculated into the peritoneal cavity of rabbits and the bacilli had been found disseminated throughout these animals within twenty-four hours. There was no positive ground for saying that the bacilli found in the nasal secretion of this patient were virulent, since contagion had never been demonstrated to occur by this means. The bacilli in the rabbit experiments reacted to staining methods exactly as did the bacilli from this man's nasal secretion, and yet there was no doubt but that the bacilli in the rabbit were dead.

Dr. Morrow said that when in San Francisco Dr. Stallard had shown him a specimen which had been lying in a closet for ten years at least. The bacilli had conserved their external characteristics, and appeared typical in form, and they reacted just the same to stains as if freshly extracted. No one had yet determined whether the lepra bacillus was dead or alive in the specimens examined.

Dr. Sherwell remarked that he had been impressed with the long period of incubation in this case.

Dr. Fordyce said that the period of incubation was either very long or else the disease had been contracted from some other member of the family. The former view was the more probable one.

A Case of Prurigo Gestationis. Presented by Dr. A. D. Mewborn.

The patient, H. B., aged 19 years, is a native of Armenia, and has been married two years. Her father died of pneumonia. Her mother is living and well; she has a younger sister in good health. She cannot recall what children's diseases she has had. General health good. Her first skin lesions appeared about three months before the birth of her first child (who is now one year old) as an eruption, accompanied by intense itching, on the arms and forearms—more marked on the extensor surfaces near the elbows. The eruption then, was described as similar to the one at present existing. There were no vesicles, nor bullæ. No other part of the body was affected. Itching was greater at night, and both itching and eruption disappeared at birth of child. She has remained free of eruption until about two months ago, when the present eruption appeared on arms, abdomen, buttocks and legs. She is now in her sixth month of pregnancy (fœtal movements perceptible). The eruption on the extensor surface of the arms is papular, with typical blood crusts

capping the papules. Palms free; dorsal surface of hands affected to finger nails; skin thickened (lichenization), fissured and excoriated in places. No signs of furrows, no lesions between fingers. On the flexor surface of forearms near wrists are shiny papules resembling lichen simplex. Eruption is not polymorphic—no vesicles, no wheals, no bullæ, nor tendency to circinate arrangement or grouping—as would be expected in herpes gestationis or dermatitis herpetiformis of Duhring. There are similar pruriginous areas, with resulting papules and excoriations on the buttocks, thighs and legs extending down to the ankles. There is a belt-like area of lesions running across abdomen just below umbilicus. There are a few lesions on the forehead over the eyebrows and on the sides of jaw and neck. The phenomenon to which I wish especially to call your attention is the anæsthesia to pain, extending from shoulders to wrists on both arms. The sensibility to hot and cold is preserved. A week ago there was anæsthesia on the dorsum of hands. There are no other anæsthetic areas accompanying the eruption. Gastou (Annales de Dermat. et Syph., 1900, page 233), in a paper on prurigo gestationis noted a case in which there were areas of anæsthesia on the arms. The anæsthesia in his case was very transitory. In this case the urine was negative as to sugar and albumen. While unable to obtain an exact blood count—in six specimens stained with Goldhorn's polychrome methylene blue and eosine—there was no marked increase in the number of eosinophiles. This prurigo, accompanied by anæsthesia to pains, is quite common in the St. Louis Clinic at Paris. Gastou in Annales de Dermat. et Syph., 1899, p. 970, describes this form of toxic prurigo as especially common in drinkers of absinthe, cordials, bitters, aperatives, etc. There was no history of using alcohol in any form in this case.

Dr. Morrow said it was recognized that localized areas of anæsthesia were very common in many forms of disease—indeed, it seemed to him to be a not unusual expression of the uric acid diathesis. It would be interesting to inquire whether there was a hysterical element in this case which might account for the anæsthesia. He had seen a number of cases of vesicular bullous disease develop in conjunction with pregnancy, but never prurigo.

Dr. Robinson said he would not like to make a diagnosis of prurigo in this case without watching it much longer. He had seen an exactly similar case about one year ago, and two weeks later it was an excellent specimen of dermatitis herpetiformis. He had seen other similar cases. He did not think we knew enough about dermatitis herpetiformis to exclude it simply upon certain blood conditions which had been found associated with that disease.

Dr. G. T. Jackson looked upon the case as one of dermatitis herpetiformis. It was certainly not what would be called prurigo in this country, though this might possibly be the French use of that term.

Dr. Fox objected to the use of the term prurigo, which, outside of France, is commonly applied to an entirely different affection.

Dr. L. Duncan Bulkley said that some years ago a number of these cases had been described as prurigo by the French, but he had personally included a number of them as prurigo gestationis, when he described that condition twenty and more years ago. In the cases that he had seen the itching had been at times terrific. If the irritation were sufficiently severe in the case under discussion the vesicular lesions would probably make their appearance. The disease appeared to him distinct from true dermatitis herpetiformis.

Dr. Johnston said he agreed with the general opinion, but he did not see that anæsthesia was connected with the prurigo at all. There was not only anæsthesia but muscular atrophy of the interossei and of the forearm muscles. It was extremely probable, therefore, that she had some lesion of the spinal cord, probably a cervical syringomyelia.

Dr. S. Lustgarten said that traumatic hysteria was often met with, and the existence of this eruption might have caused sufficient traumatism to give rise to hysteria. This woman should be examined for hysterical stigmata.

Dr. Fordyce said he did not think it was Dr. Mewborn's intention to classify this disease with the prurigo of Hebra. It certainly did not present to him the features of a dermatitis herpetiformis or of herpes gestationis.

Dr. Mewborn said he had presented the case as one of prurigo gestationis corresponding to the variety described in France by Gastou, who mentioned the occurrence of anæsthetic areas in conjunction with the eruption. Besnier called it an auto-toxic prurigo of pregnancy. In this patient there was nothing found in the urine or in the intestinal tract to account for the cutaneous manifestation. When the eruption first appeared it was very much like an urticaria, and the itching was worse at night, and instead of being relieved was aggravated by cold. There had been no grouping of the lesions and no polymorphism. There were some points of similarity to the prurigo with anæsthesia found in those drinking absinthe, bitters and various other highly alcoholic drinks and essences. These beverages were known to be very prone to produce peripheral neuritis.

A Case for Diagnosis. Presented by Dr. S. Sherwell.

Mrs. S., æt. 44, native of Nova Scotia, has one boy, aged 17 years. Came under observation three weeks ago on account of an unusual eruption, with a symmetrical girdle-like distribution around the waist. This eruption appeared about two years ago and has become more pronounced. Eruption consists of slightly elevated and pigmented spots, resembling somewhat *verruca lata seborrhoica,* as seen in old people on the face. There was some resemblance to a striate nævus. No subjective symptoms

referable to the eruption, but complains of pains in the back and spine just at the point where the spinal nerves emerge to supply the cutis in the affected region. She is a neurotic woman, although apparently in good general health. Her collateral family history is very neurotic, a brother and sister having respectively paralysis agitans, and one died of general paralysis. Patient fell from a hammock eight years ago, from which she suffered a severe shock..

Dr. H. G. Klotz looked upon the case as one of superficial warty growth, similar to the so-called seborrhoic warts, and Drs. Allen and G. T. Jackson concurred in this diagnosis.

Dr. Morrow said that he also looked upon them as seborrhoic warts, and believed the localization had been determined by the wearing of the corset. He knew of a series of such warts having formed in males about the upper portion of the neck from the pressure and irritation of the collar of the undershirt.

Dr. Robinson said that it was undoubtedly a warty condition, but he did not see the applicability of the term "seborrhoic," for he did not believe it had any connection whatever with the sebaceous glands. He recalled a case in which, after scratching, sufficient irritation was produced to give rise to such a warty condition.

Drs. Bulkley and Whitehouse looked upon the case as one of warts.

Dr. Sherwell said that verruca lata seborrhoica had been his first diagnosis, but after considering the markedly neurotic family history and the intense pain in the back, it seemed to him possible that it was rather a condition resulting from central irritation. The lesions, too, resembled to a certain degree, those of a pigmented urticaria. He would probably treat the case with a strong solution of resorcin and salicylic acid.

A Case of Naevus Unius Lateris. Presented by Dr. A. R. Robinson.

The patient was a child, and the nævus extended from the inner canthus of the eye down nearly to the tip of the nose, where it terminated in a horn-like projection.

Dr. Bulkley thought a good result would be obtained from the use of the high frequency electrical current, the horn being first removed. He had obtained some good results, in cases somewhat similar, from such treatment.

A Case of Keloids of Neck. Presented by Dr. Fox.

The case was presented again to show the effect of the X-ray and of the static current. The X-ray alone had been used upon the central tumor, which had flattened considerably. A number of small tumors on the occiput had disappeared entirely. The best result had been obtained by application of the high frequency current, as recommended by Dr. Piffard.

A Case of Mammary Carcinoma Treated by the X-ray. Presented by Dr. A. R. Robinson.

On coming to him the woman had an enormous ulcerated carcinoma of the breast of about five years' duration. The arm was very much swollen, and the case was evidently inoperable. The X-ray treatment was begun last October, and had been continued since that time about twice a week. The first signs of improvement were noticed in about two weeks. The high tube was used with exposures of ten minutes. The case had never been operated upon.

Dr. Morrow said that the result was excellent up to a certain point, but it was questionable whether the continued use of the X-ray would dispose of the central mass still remaining.

Dr. J. M. Winfield said he had seen a similar case, and the persistent use of the X-ray had resulted in recovery. He thought the same would take place in Dr. Robinson's case.

Dr. Allen presented in this connection an improved focus tube designed by Dr. M. Franklin.

Dr. Piffard said that he had an English tube having an opening about one inch in diameter, and that through this all the X-rays passed.

Demonstration of Ultra-violet Light. Dr. H. G. Piffard gave this demonstration.

He said that the Finsen treatment had not been exclusively by the ultra-violet ray. He then presented a new lamp, a hand lamp taking eight amperes of current and having a duplicate arc. It was of French design and manufacture. Although of small size the lamp was very powerful, and by bringing it down close to the patient just as much could be accomplished as by using a much larger light with the patient further off. There was provision for the circulation of water around the iron electrodes and shield of the instrument. The ultra-violet light had been developed in a new direction by the use of a voltage of 100,000 and 200,000, and it was this which he intended to demonstrate. A lamp, known in England as the St. Bartholomew's Hospital lamp, was exhibited, and also an American modification of it, which, though much smaller, was decidedly more powerful. To prove whether or not ultra-violet light was being generated use was made of the fluorescence of certain substances. A thick piece of rock salt, which was opaque to the X-ray, was shown to be entirely transparent to the ultra-violet ray. Dr. Piffard also showed how transparent quartz was to this light, and how the ultra-violet rays were entirely cut off by a piece of glass, as, for example, a spectacle lens. In order to do away with the use of the compressor, Dr. Piffard made use of adrenalin, introduced under the integument by means of cataphoresis. The process required about five minutes, and at the end of this time the skin under the electrode showed a perfectly ischæmic area, which lasted for about half an hour.

With regard to the use of the high frequency current in skin diseases, Dr. Piffard said he made use of the static machine and a transformer. The treatment had been found useful in lupus erythematosus.

Dr. Allen thought the lamp presented had points of decided superiority over others in the market, and he hoped soon to have an opportunity of making use of this lamp in his own work.

ABSTRACTS.

The So-Called "Invisible" Microbes. E. Roux. (*Bulletin de L'Institut Pasteur,* No. 1, 1903.)

The hypothesis advanced by Pasteur in 1881, that the microbes of rabies were so small as to be invisible, has been frequently advanced to explain the failure to find the microbe in such diseases as small-pox, measles, scarlet-fever, syphilis, etc. Until the year 1898, these "invisible" microbes were purely speculative, but the last four years have given them a reality in a number of diseases. Roux, in the first installment of a review written for the new "Bulletin de L'Institut Pasteur", presents the methods used in demonstrating the existence of a few of these invisible microbes. Loeffler and Frosch found in the serum taken from an unbroken vesicle of a cow affected with aphthous fever, highly refractive granules. These granules were barely visible as minute points, and it was impossible to stain, or to cultivate them on any known media. Their existence and pathogenic rôle, however, was demonstrated in the following manner. A part of this aphthous serum was diluted in thirty-nine parts of water and passed through a Berkefeld filter. To be assured of the proper function of the filter, there was added an equal amount of the same dilution of the *Bacillus fluorescens.* The filtrate was perfectly limpid and gave no growth on different media. It was evident from this that the *Bacillus fluorescens* had not passed through the filter. A cubic centimeter of this filtrate, which appeared sterile, was injected into the veins of a calf. The calf developed the characteristic aphthous fever. It was, however, a microbe and not a toxine which gave to the filtrate its activity, as it sufficed to pass the filtrate through a Kitasato filter (the pores of which are much smaller) to render it an inactive liquid.

While these researches of Loeffler and Frosch were going on, the pleuro-pneumonia of cattle was being studied at the Pasteur Institute. In the interlobular septa of the lungs of cows dying of this disease, there was found an infiltrating serum. If this serum was injected under the skin of another cow, the latter would contract the disease, developing an engorgement of the lungs, followed by death. In the serum distending the subcutaneous connective tissue, no microbes could be found. Inoculations upon different media remained sterile; nevertheless, the presence of a specific microbe could be demonstrated by means of cultures in the collodion sac, in the following manner: A small collodion sac filled with nutritive bouillon was inoculated with a trace of the pleuro-pneumonic exudate; another sac, as control, was inoculated with a trace of the same exudate which had been sterilized by heating to 55 degrees C. The two sacs were introduced into the peritoneal cavity of a rabbit and allowed to remain fifteen days. The contents of the sac inoculated with the active virus, when aspirated into a pipette was seen to be faintly opalescent, so slight as to be scarcely perceptible except by comparison with the control which remained limpid. Under the microscope, this opalescent liquid showed exceedingly small, actively motile granules. After coloration with thionine and under the highest powers there appeared slightly elongated points, but so small as to be difficult to describe.

Did these bodies develope in the sac modified by its sojourn in the rabbit's body? To answer this, four passages of this opalescent fluid were made through the "process of the sac," and a small amount was inoculated under the skin of a cow, which, after the usual period of incubation, developed the typical disease. It then was certain that the microbe of pleuro-pneumonia of cattle had been cultivated in the sacs and that it was a microbe on the borderland of invisibility.

Based upon these results, cultures were obtained *in vitro* at a temperature of 38 degrees C. in bouillon of Martin (containing 6 to 8 per cent. of beef-serum). The growth produced a faint opalescence. By adding agar to the bouillon-serum and cultivating on this solid medium, there was obtained a growth which was barely visible as an unpolished surface on the agar. If colonies were very numerous they became visible as pin-head elevations.

If the cultures in bouillon-serum of the pleuro-pneumonic serum were passed through Berkefeld or Chamberland filters, the filtrate remained sterile. But if these cultures were diluted with twenty or thirty volumes of water, the microbes passed through these filters. This method proved very useful in obtaining pure cultures, as the Berkefeld and Chamberland (F) filters by allowing this microbe to pass through when diluted, and by restraining larger microbes at once removed all contaminations. The Chamberland filter marked B could not be used, as that stopped even the pleuro-pneumonia microbe.

In 1898, Sanarelli observed at Montevideo in the Hygienic Institute a singular disease of rabbits. The disease made its appearance as a catarrhal affection of the eyes; after forty-eight hours the lids became swollen and the eyes closed, allowing a purulent discharge to escape. At the same time the face became swollen and œdematous, the anus and the genital orifices became inflamed, the testicles became hypertrophied, neoplasms developed on the ears and extremities. Death took place on the fifth day. The secretion from the conjunctivæ, the œdema of the lids and skin as well as the pulp of the internal organs were virulent. A trace of these products injected under the skin, or in the veins, or placed upon the conjunctiva, or even ingested, gave the disease. The tumors were formed of a myxomatous tissue in which were dilated capillaries. No microbe could be found by culture or highest powers of the microscope.

Sanarelli called the disease "*virus myxomateux,*" and concluded that the microbe was too small to be seen. He made no mention of filter experiment.

In the same year (1898), Beijerinck published the description of a disease of the tobacco-leaf called "mosaïque," which was produced by what he called a "*contagium vivum fluidum.*" The young leaves of the diseased plant presented disseminated areas of discoloration. The discoloration was found to be due to changes in the chloropnyl with a local necrosis. In the process of curing the leaf, these brown spots fell out, leaving holes. Healthy leaves could be infected from these patches and the juice of the diseased leaf, after filtration through the finest filter and after heating to 70 degrees C., was capable of conveying the disease. Even months conservation in 95 per cent. alcohol failed to destroy the virus. Its power to penetrate deeply into the nutrient agar, on which attempts were made to grow it, was shown by the experiment of destroying, by means of a sublimate solution, the surface layers of agar on which the virus had been allowed to remain some days. The deeper layers of the agar were found to be virulent. This diffusion into the agar gave support to his theory of a *contagium vivum fluidum.* Roux considers this conception as ingenious, but that it does not exclude the possibility of there being an invisible microbe. —Mewborn.

The Hygiene of Barbershops.

C. Bruhns, of Berlin, has written a book upon this important topic, which is reviewed in the *Monatshefte f. prakt. Dermatologie*, 1903, xxxvi—262. The fol-

lowing are the rules he lays down. 1. Razors and shears are to be wiped off with absolute alcohol, and the hair-cutting machine placed in boiling water after every time they are used. 2. No shaving brush is to be used except the customer brings his with him. Instead, the lather is to be made by the barber's fingers. No sponge shall be used, but a piece of mull; that must be thrown away as soon as used. 3. Paper napkins must be used over the linen apron and also to dry the face, and then thrown away. 4. Powders must not be applied by means of a powder puff, but blown on the face. Powdered alum must be used to stop bleeding instead of the alum stick. 5. The hone shall be touched only with the disinfected razor. 6. No brush shall be used except one that is freshly disinfected with formalin vapor. All combs must be made of aluminum or nickel-plated steel, and these must be boiled. 7. The barber must wash his hands and clean his finger-nails before touching a customer. 8. No barber with a contagious skin disease or syphilis must be allowed to work. 9. No barber must attend a customer with a contagious skin disease excepting in the customer's home, and afterwards he must wash his hands with a 1 to 1000 sublimate solution.—G. T. J.

The Treatment of Furuncles. Dr. Moritz Cohn. (*Montshft. f. prkt. Dermat.* 1903—xxxvi—178.)

Dr. Moritz Cohn, after a severe personal experience with furunculosis, presents the following scheme for their treatment: All internal medication for the furuncles as such is to be avoided as useless. At the very beginning of the boil there should be rubbed into it two or three times a day an ointment composed of Ichthangan 5. to 10., Aq. destil. 5., Glycerin 10., Lanolin 35., Vaselin fl. 40. The inunctions should be made at first about the boil and then over it. In a few days, or perhaps within twenty-four hours, the inflammation is markedly reduced, and the treatment can be continued with salicylnc acid plaster, or one per cent. ichthyol paste.—G. T. J.

Lymphocytosis of the Cerebro-Spinal Fluid in Dermatitis Herpetiformis and in Syphilis. (*Annales de Derm. et. de Syph*, Nov., 1902, Jan., 1903.)

At the meeting of the Société de Dermatologie et de Syphiligraphie of Nov. 6, 1902, M. Milian presented a patient suffering from a typical form of "Duhring's disease," who presented in addition the following nervous symptoms: Very exaggerated patellar reflexes, crises of weeping and of laughter, inequality of the pupils, and mydriasis on the left side, with paresis of the reaction to light. On account of these nervous symptoms lumbar puncture was performed, which disclosed an unquestionable lymphocytosis. Culture from the fluid remained sterile. Milian concludes from this observation that dermatitis herpetiformis arises from an organic lesion of the nervous system. Eosinophilia is not specific of this affection. In the discussion that followed, Jeanselme and Gastou emphasize the presence of similar nervous phenomena that they have observed in instances of this affection.

In the January (1903) number of the *Annales*, there appears an article by M. Paul Ravout, entitled "A cytological study of the cerebro-spinal fluid in syphilitics." Under normal conditions the cerebro-spinal fluid as obtained by lumbar puncture is clear, and contains few or no cellular elements. In meningeal inflammation or irritation, cellular elements are present in the fluid varying in number and variety according to the extent and nature of the morbid process. Hence it is concluded that the presence of cellular elements in the cerebro-spinal fluid is a sign of an organic lesion, causing an inflammation or irritation of the meninges. The virus of syphilis is one of the most frequent agents that act upon the nervous centers and their coverings. The question therefore suggests itself, how far may an examination of the fluid from lumbar puncture, aid us in determining the condition of the meninges in this disease.

Most of the facts referred to by the writer have been already published by M. Widal, others were obtained in the service of M. Thibierge. The technique of lumbar puncture is first detailed at some length, for which reference may be made to the article. It is stated that lymphocytes are the cells most frequently found, hence the name lymphocytosis; sometimes polymorpho-nuclear leucocytes are found in greater or less numbers.

Observations upon a limited number of cases of cephalalgia in syphilitics, where this was the only symptom calling attention to the nervous system, showed that it was rarely possible to demonstrate a lymphocytosis of the cerebro-spinal fluid in this class of cases. In syphilitic hemiplegia numerous observations have shown an abundant lymphocytosis of the cerebro-spinal fluid; so that in the case of a subject recently seized with hemiplegia, the confirmation of this symptom should at once suggest the syphilitic origin of the paralysis, for in ordinary hemiplegia from cerebral næmorrhage this sign is wanting. In two cases of facial paralysis in syphilitics, an abundant lymphocytosis of the cerebro-spinal fluid was observed.

In two cases of hereditary syphilis in infants, this sign was also positive.

Numerous observations have shown the existence of a lymphocytosis of the cerebro-spinal fluid in tabes and in general paralysis. In the former it is more accentuated in the earlier stages of the affection. In doubtful cases of general paralysis MM. Joffroy and Mercier consider that a lumbar puncture should always be made, and that the presence of a lymphocytosis of the cerebro-spinal fluid is of great diagnostic value.

Babinski and Charpentier have stated, on the basis of numerous observations, that Argyll Robertson's sign, in default of other nervous symptoms, should cause suspicion of syphilis, and the fear of the beginning of tabes or general paralysis; and hence the institution of a vigorous anti-syphilitic treatment. In proof of this a number of instances have been recorded in which the sign of Argyll Robertson was the only nervous symptom and in which there was a marked lymphocytosis of the cerebro-spinal fluid also present.

The writer concludes that in a large number of syphilitics at all periods of the disease, a lymphocytosis of the cerebro-spinal fluid has been demonstrated, showing meningeal disturbances which anatomical examinations have been able to confirm, in most of the forms of cerebral syphilis, in syphilitic myelitis and in tabes and general paralysis; and that in many of these cases the clinical symptoms were not sufficient in themselves to clear up the diagnosis. Hence, in syphilitics with slight or obscure nervous symptoms, it is urged that an examination of the cerebro-spinal fluid should be made and the constatation of a lymphocytosis of this fluid should render vigorous antisyphilitic treatment imperative.—Bowen.

BOOK REVIEWS.

The Surgical Diseases of the Genito-Urinary Organs. E. L. Keyes, A.M., M.D., LL.D., Formerly Professor of Genito-Urinary Surgery, Syphilology and Dermatology in the Bellevue Hospital Medical College, etc., etc., and E. L. Keyes, A.B., M.D., Ph.D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital. New York and London: D. Appleton & Co., 1903.

The work before us is a revision of Van Buren & Keyes' Text Book on "Genito-Urinary Diseases, including Syphilis," which first appeared in 1873, followed by a revision by Dr. Keyes with slight modification in the title in 1888. This volume, we are told in the preface, "is the legitimate grandchild" of the original treatise. No one can for a moment doubt the strict applicability of the

qualificative, *legitimate,* in this connection. The personality of the parent is expressed in every lineament of the descendant—the hall-mark of heredity is stamped on every page. While the plan and scope of the work have been modified, the same clear-cut features which distinguished the original treatise—the direct, forcible expression,—the terse, incisive style, the independent, magisterial mode of utterance are all reflected in the work before us. We also note that in the process of evolution, the prototype has been shorn of its appendage: syphilis, which rather detracted from its symmetry as a text-book on the surgical diseases of the genito-urinary organs.

In a notice of the second edition of this book, which appeared in this JOURNAL (July, 1888), the reviewer took occasion to criticize the illogical association in a single book of topics so dissimilar as syphilis and surgical diseases of the genito-urinary organs. Evidently the authors have become impressed with the same conviction, as in the work before us syphilis has been entirely eliminated upon the ground that "it is only a genital disease in its method of approach and not at all in its manner of expression."

With the exclusion of syphilis, gonorrhœa has been given the magnified importance to which it is entitled as the prolific cause of so many morbid conditions, both acute and chronic, of the genito-urinary tract.

In its present shape the work is a most admirable and complete presentation of the subject. The whole urinary section has been almost entirely rewritten and brought fully up to the standard demanded by the requirements of modern advances in our knowledge. The best part of the work is that relating to gonorrhœa, stricture, the prostate, the bladder, and the kidneys; especially the sections on posterior urethritis, prostatitis, urinary infiltration and prostatic hypertrophy.

The bacteriology of the entire urinary tract and urinary asepsis are given with a sufficiency of detail, while the general management of inflammation of the upper urinary tract is treated from an original standpoint. Almost the entire work is taken up with the consideration of urinary disorders, while quite a subordinate importance is given to purely genital and sexual maladies.

The authors adopt a conservative attitude in relation to certain questions of surgical treatment, the superior value of which has not been fully established by sufficiently favorable experience; such, for example, as the ureteral catheterization and the use of the cystoscope as a means of diagnosis. The various improved instruments are well illustrated, the operative technique fully described, and their disadvantages as well as their advantages are set forth. While recognizing the applicability of urine segregation and of the ureteral catheter in certain cases, the author concludes: "I am absolutely opposed to the free use of the cystoscope or the ureteral catheter as a familiar means of diagnosis. The clinician should do as well without them—the patient much better." The authors show good judgment in omitting all mention from the text of the new surgical intervention of stripping the kidney capsule as a means of cure in chronic Bright's disease.

The conservative view of genito-urinary therapeutics is usually the sane view, and it must be a source of great satisfaction to the senior author that his conservative attitude toward many innovations in the surgery of the genito-urinary organs has been justified by the test of enlarged clinical experience. This book has seen two great storms of misguided enthusiasm in this department—the one for cutting the anterior urethra, the other for removing the testicles; and has been influenced by neither. Both have been condemned by their practical results.

The book is gotten up in most attractive style and illustrated with 175 figures in the text, and with 10 plates, 2 of which are colored.—P. A. M.

Consultations sur les Maladies des Voies Urinaires à l'usage des Practiciens. G. DE ROUVILLE, Prof. Agregé á la Faculté de Medicine de Montpellier. Préface par le Docteur Tuffier. Paris: J. B. Baillière et Fils, 1903.

This little book is essentially practical—it is a sort of *vade mecum* for the

practitioner in the presence of the numerous affections and accidents of the genito-urinary organs—often of a grave character—and which demand immediate surgical intervention. It tells the practitioner not only what to do, but how to do it. The author does not give a variety of operative procedures to choose from in dealing with the various emergencies that may arise in practice, but imposes his own judgment, indicating which is best. This is admirably described and well illustrated by figures in the text.

Due attention is given to the pathological as well as the surgical side of diseases of the genito-urinary organs. The etiological elements, the clinical signs, the diagnosis and prognosis and the indications for medical as well as surgical treatment are given in a clear, concise and practical manner. The different affections are taken up in alphabetical order, thus facilitating convenience of reference.

The author has succeeded in condensing within the narrow compass of two-hundred and sixty-five pages the essential principles as well as the practical details of the medico-surgical treatment of diseases of the genito-urinary system.—P. A. M.

Les injections mercuriales intra-musculaires dans la syphilis. By Dr. Alfred Levy-Bing. C. Naud, Editeur, 3 Rue Racine, Paris, 1903.

The author has taken advantage of the very abundant material afforded by the Saint-Lazare Hospital at Paris, to make a comparative study of the different salts of mercury used in the intra-muscular injection treatment of syphilis. Most of his cases were in the service of such eminent advocates of this method as Jullien, Barthelemy, Le Blond and Verchère. Under the strict rules enforced upon the inmates of this semi-correctional institution, the cases were under observation for much longer periods than is usual in hospital or dispensary cases. The author's observations embraced twenty-six mercurial preparations. In over six thousand injections in five hundred cases, covering a period of two years, he had no serious accidents. Each salt is considered as to its chemical properties with special reference to its richness in mercury. Physiologically, they are compared as to dose, therapeutic value, production of pain or discomfort. The technique of making the injection is shown to be the prime factor in avoiding the dreaded abscess, embolism or nervous accidents. Illustrative clinical notes accompany each preparation studied. The author concludes that "the method of intra-muscular mercurial injections is the method *par excellence* in the treatment of syphilis. It is more scientific, more rapid, more active than either frictions or internal administration. At one time considered the exceptional method, it is destined to become the classical method. Among the insoluble preparations, the author recommends calomel, grey-oil, basic salicylate, and proto-iodide. Among the soluble he recommends the lactate, the double iodide of mercury and sodium, the neutral salicylate, the benzoate, and hermophenyl."—A. D. M.

Fototerapia, Radioterapia. By Angelo Bellini (Manuele Hoepli, 362 pages, 65 illustrations). Milano, 1902.

The author has condensed in a form suitable for the general practitioner an epitome on the physiological and therapeutical action of light and of X-rays. In the first part, which is devoted to a general consideration of the action of light upon the inorganic world, plants, micro-organisms, animals and man, the author leads up to the more recent therapeutical applications by means of the lamps of Finsen, Bellini, Lortet-Genoud, and Bang. While the author advances nothing new in regard to the nature of the X-rays, he inclines towards the hypothesis which regards the X-rays as ultra-violet, *i. e.*, rays of extremely short undulations. The work is rich in bibliographical references and is of value to the student of dermatology owing to the author's personal experiences in the use of photo-thermo-therapy, actino-therapy and radio-therapy in the treatment of cutaneous diseases. —A. D. M.

NOTICE.

PROVISIONAL PROGRAMME OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE

AMERICAN DERMATOLOGICAL ASSOCIATION,

TO BE HELD AT THE NEW WILLARD HOTEL, WASHINGTON, D. C., May 12th, 13th and 14th, 1903.

PRESIDENT, DR. J. T. BOWEN.

FIRST DAY, MAY 12TH.

Morning Session at 10 A. M.

1. Address by the President.....DR. J. T. BOWEN
2. A Case of Glanders in the Human Subject...DR. J. A. FORDYCE and DR. A. D. MEWBORN
3. Recent Contributions to Our Knowledge of the Hysterical Neuroses of the Skin. DR. A. VAN HARLINGEN
4. Recurrent Bullous Dermatitis in an Hysterical Subject DR. C. J. WHITE
5. Sarcomatosis Cutis.....DR. G. W. WENDE
6. Fragilitas Crinium.....DR. G. T. JACKSON

SECOND DAY, MAY 13TH.

Morning Session at 10 A. M.

7. General Discussion:
 The Use of the Roentgen Rays in Dermatology.. Reporters, DR. H. W. STELWAGON, DR. W. A. PUSEY
8. Syphilis and the Medical Secret.....DR. P. A. MORROW
9. Note on a Method of Early Diagnosis in a Case of Leprosy.....DR. F. J. SHEPHERD

Evening Session at 8 P. M.

10. Dermatitis Venenata, a Supplemental List.....DR. J. C. WHITE
11. A New Drug Eruption of the Iodoform Type. DR. S. POLLITZER
12. Report of a Case of Dermatitis Gangrenosa Infantum DR. J. NEVINS HYDE, DR. E. R. LE COUNT
13. Report of a Case of Symmetrical Gangrene..DR. E. B. BRONSON
14. Report of the Committee on Nomenclature.

THIRD DAY, MAY 14TH.

Morning Session at 10 A. M.

15. Report of the Committee on Statistics.
16. A Case of Multiple Angioma.....DR. A. POST
17. The Present Status of Phototherapy...DR. F. H. MONTGOMERY
18. Some Pre-Cancerous Affections of the Skin. DR. M. B. HARTZELL
19. Paludides. With the Histopathology of a Case of Malarial Purpura.....DR. M. F. ENGMAN

CHARLES J. WHITE, Secretary.

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METHODS OF TEACHING DERMATOLOGY.*

BY JOHN T. BOWEN, M.D., Boston.

IN following the custom of welcoming the Society to its annual gathering, and of adding a few words upon some topic of general interest, it has seemed to me not inappropriate, at a time when methods of education in general are being widely discussed, to lay before you a few of the thoughts that have been passing through my mind of late, with regard to the various methods of teaching dermatology. The general subject of dermatological education has already been ably reviewed from this chair by Dr. Morrow in 1890, and by Dr. White in 1897. My purpose to-day is to confine myself entirely to *methods* of teaching.

There are certain problems that apply to medical education in general, the definite solution of which would make the task of one seeking to teach dermatology in the very best possible way, a much easier one. Unfortunately there is as yet no definite agreement among educators with regard to certain fundamental principles. What are the relative values of the didactic lecture, clinical demonstration, recitation, and teaching in small sections? Opinions will be found to vary widely, and it is to be emphasized that hard and fast

* President's address before the twenty-seventh annual meeting of the American Dermatological Association, held at Washington, D. C., May 12, 13, 14, 1903.

rules cannot be laid down to govern all branches of the medical curriculum. Yet I think that I am justified in saying that there is a growing tendency to subordinate the didactic lecture, and to devote the most time to clinical exercises in small sections. It may be worth our while, then, to examine the question, how these various methods of teaching are to be regarded in our special study, dermatology.

We are confronted, at the outset, with the fact that in very few instances is it possible for a university to offer what may be called an ideal course of instruction in dermatology. Such a course, in my opinion, demands imperatively the control by the Department of a certain number of hospital beds, which may be used as a means of keeping cases suitable for teaching until the day for demonstration, and for giving small groups of students a far better opportunity for examination of cases, and observation of their treatment, than can be obtained in the out-patient department. In the second place, the *number* of students is an important factor, unless the equipment of the department is so complete that a sufficient force of instructors is available for teaching a large class in sections. For it is to this section work that we must, in my opinion, look for the best results in teaching dermatology. In no other branch of medicine is the training of the eye, the accurate observation of color, size, and shape, of more essential importance than in dermatology. In order to acquire this training it can hardly be denied that the student should be brought into close proximity with the patient, and afforded sufficient time for a careful and accurate examination. For the beginner it is not desirable that a very large number of cases be used. A few typical cases carefully examined and discussed, by this method, will be of more value than a large number, as a sense of hopeless confusion is very apt to be felt, when one is introduced suddenly to a large number of the various dermatological types of disease. An advantage of this method, that is apparent in all section teaching, is that the student is made to think for himself; his mind, instead of passively receiving what is brought to it, is in constant activity, and this may be fostered more or less by the ingenuity of the instructor. The student should be made to describe what he sees with accuracy, and then led to form the proper deductions from it. Huxley has said that "to be accurate in observation and clear in description is the first step toward good scientific work." Certainly no mode of teaching dermatology can

further this principle so well as that of small sections of men brought into close contact with the patient and the instructor.

Another question that arises is, what, if any, order or system is to be pursued in the case of beginners in dermatology; a subject that it seems to me may not have met with sufficient attention at the hands of teachers. We are supposing that our class is composed entirely of college graduates, with, therefore, some experience in Latin nomenclature, and in their third year of medical study, which is as early as it is advisable to begin the study of dermatology. Now it seems to me that, like most other studies, dermatology has a certain alphabet which must be mastered before much progress can be made, and that it will be a saving of time if the essentials of the subject can be assimilated at the outset. The only text-book, so far as I know, that has emphasized this point is that of Dr. Radcliffe Crocker, which contains at the beginning a very suitable page of "instruction to students," in which he urges the thorough mastery of symptomatology before beginning to study special diseases. He also advises the student to confine his reading at first to the more common diseases. A preliminary knowledge of the so-called primary and secondary lesions is absolutely essential. No class entering for the first time on the study of dermatology should be allowed to interest itself in other branches of the subject until the best of them at least have thoroughly mastered the principles of symptomatology. After this the more common affections of the skin should be brought before them for study, to the exclusion of rare and extraordinary types of disease, which it is true they may never see again, but which may produce much confusion. The spectacular element, although engaging, is not compatible with the true scientific spirit. Such cases should be reserved for a later period in the course, and for students of advanced standing.

If it be granted, then, that section teaching should be developed to the greatest degree compatible with the resources of the university in clinical material and in the number of instructors available, what, it may be asked, should be the position of didactic lectures, clinical demonstrations to a large class, and recitations?

With regard to didactic lectures, the situation has been materially altered during the last twenty-five years by the many excellent text-books on dermatology that are at the student's disposal, which did not formerly exist. Then it was necessary for an instructor to outline clearly his own conception of the specialty as represented in its various

affections; and it is impossible to see how dermatology could be well taught without full didactic lectures, supplemented by clinical demonstrations. To-day any one of a number of text-books will give the student the same knowledge that the instructor is able to impart, with the exception of occasional points on which he may differ from current opinion, and which, for the less advanced student at least, are of minor importance. Still there is much to be said of the value of modes of presentation, which some instructors have the natural faculty of developing with unusual clearness. Nor should the personality of the lecturer be lost sight of, often an extremely valuable factor. The didactic lecture may to a certain extent be advantageously combined with object teaching, by the exhibition or handing about of pictorial representations of disease, and by the demonstration of wax models, which often are only a little less life-like than the conditions from which they are copied.

A good word must also be said for the occasional recitation, provided the class be not too large. A review in recitation, at intervals, of the work that has been done, or a clinical conference, in which the instructor and class take part informally, have been much appreciated by students, and are of real value.

The clinical lecture is, as I have said, the most common method of teaching dermatology in vogue to-day in America, and it is unlikely that it will be wholly superseded. Its advantages are very great, and in many cases, where material is small, and the number of instructors or assistants limited, it is unquestionably the only available method of value. In this way the less common affections can be shown at once to a large number of students, who would not be able to see them in any other way. It is for the instructor a most fascinating form of exercise, far more so than any other; and to this fact may be due, in some degree, its great popularity. Its opportunities for dramatic effect are very great, and while this feature may be claimed to be an aid in serving to memorize the subject, it should be remembered that it may also work harm in accentuating situations of little practical value. On the whole, it is probable that this method of teaching will continue to hold a prominent position, and it is desirable, in my opinion, that it should do so.

In the Medical School of Harvard University, dermatology is taught first to students in their third year of medical study, and an examination is required for a degree. The exercises consist of a

certain number of didactic lectures during the first half year, a general clinical demonstration in an amphitheatre once a week throughout the year, and as much section work as can be arranged for. The amount of section work is naturally dependent on the number of men in the class. Some of this section work will be carried on next year in the Ward for Skin Diseases of the Massachusetts General Hospital.

It has been decided by the Faculty that beginning with 1904-1905 the fourth year shall be exclusively elective, and in dermatology two distinct classes of electives have been arranged; one such as is considered suitable for the general practitioner, consisting of section work throughout the year; and a second class in which various courses are offered to those wishing to specialize or to obtain more elaborate and advanced instruction. This second class of elective is adapted naturally to but a few students, and includes daily attendance in the capacity of assistants in the clinics and in the ward, advanced instruction in the histology and pathology of the subject, and as much personal instruction as time and opportunity may offer.

In a word, the didactic lecture, the clinical demonstration, and the recitation, all have their place in the teaching of dermatology. How much time should be accorded to each is a matter about which there may be much difference of opinion, and the question will often have to be decided according to the resources of the department. It is, however, upon the advantage of the method of teaching small sections of students from the patient or model that I would lay the most stress, as I believe that in the development of this system lies our best hope of improvement. Here we are in need of a large amount of material, and of a force of instructors. The difficulty of persuading patients to allow themselves to be shown for purposes of study is an astonishingly small one, and I believe, with Dr. Osler, that the educational side of a hospital is of direct benefit to patients, as well as to students and physicians. With the development of section work, instruction naturally becomes more complicated, and more time is demanded of the instructors, so that the best teachers of the future will be obliged, perhaps, to sacrifice some of their private work. Dermatology, however, is less exacting in time demanded than many other specialties, and a large amount of instruction could be given and private consultations still attended to. In the ideal dermatological department of the future, it is to be hoped that the endowment will be sufficient to attract men of ability and enthusiasm to the chair, who will consider research

and the teaching of their specialty their chief ends, and who will be willing and able to subordinate their private practice to their vocation as teachers.

CASES OF BULLOUS DERMATITIS FOLLOWING VACCINATION.

By James S. Howe, M.D., Boston, Mass.

(Read before the American Dermat. Assn., Boston, Sept., 1902.)

FROM July 1st, 1901, to July 1st, 1902, there have been 1,195 cases of smallpox reported by the Board of Health as having occurred in the City of Boston. During this same interval there have been, as near as I can learn, approximately about 230,000 cases of vaccination, all performed by officers of the City Board of Health gratuitously. In addition to this large number of cases 1,750 persons were vaccinated at the Boston City Hospital, and to these cases we must, of course, add a very large number of persons who were vaccinated by their own medical attendants.

Early in January of the present year, while the wave of vaccination, as we might term it, was at its full height, there were received into the Boston City Hospital for treatment a remarkable series of cases of bullous dermatitis. All of these cases appeared in persons who had been recently vaccinated.

As all of these cases were of a severe type, several proving fatal, and as I am in great doubt as to how to properly classify them, I have thought it might be of interest to the members of this association to report them.

Some of the persons afflicted applied for treatment at the Out-Patient Department of the Hospital, but owing to the condition in which I found them, I recommended them at once for admission into the Hospital Wards. The others applied for admission to the Admitting Physician, but in both cases they passed into the care of the Hospital Physicians, and it is owing to the courtesy of these gentlemen that I am now able to report these cases.

Owing to the short time at my disposal for reading this paper and

to the number of cases I have to report I shall not enter largely into a detailed account of each case, but shall endeavor, as briefly as possible, to present to you the especial points of interest in each of them, and in a final summing up of the cases to call your attention to the especial features common to them all.

Case I.—A man, 43 years of age, with a good family and personal history, with the exception of being addicted to alcohol, was admitted to the Hospital on January 10th, 1902. This man was vaccinated six months before admission to the hospital by an officer from the Board of Health. Two weeks after vaccination his left arm became rather sore and two large reddish areas appeared on the site of the vaccination. A day or two later these reddened areas were each covered with a bleb the size of a ten-cent piece. Whether this was the result of a successful vaccination or not I am unable to say, but such is the patient's own story. Twelve days before admission, or a little more than four weeks after he was vaccinated, all soreness in the arms having in the meantime disappeared, crops of bullæ, varying in size from a split pea to a quarter of a dollar, began to appear on the face and scalp, also in the axillæ, the inner aspects of the thighs and on the back and abdominal walls. Blisters also appeared on the inner surfaces of the eyelids, and in the mouth and throat. At the time of admission the chest and back was nearly covered with a bullous eruption, some of the bullæ being surrounded with a pinkish areola. Many of the bullæ are discrete, but on the lower anterior part of the neck, on the left upper arm, on nearly the whole of the back and about the hips many of the bullæ have become confluent, and broken down, and these areas are macerated and sore. The scalp is covered with bloody crusts; both eyes are closed, swollen and crusted, and a purulent secretion bathes the lids. There was no pain or itching. There were discrete bullæ varying in size from a quarter to a half dollar scattered here and there over the lower extremities. The temperature was at this time 103 degrees. On the 14th of January, two days after admission, a few new bullæ had formed, the condition of the eyes was somewhat improved, but there was great difficulty in swallowing. On the 18th, four days later, the condition was about the same, but the skin lesions seemed to be drying up and no new bullæ had formed. On the 22d the skin lesions were still improving, but his general condition was worse and he was steadily growing weaker. His breathing was rapid and difficult, and, as he was unable to swallow liquids, nutrient enemata were given.

Death occurred suddenly at eleven P. M. The autopsy revealed, in addition to the extensive lesions of the skin, gangrene of the left lower lobe of the lung and an acute lobar pneumonia of the same lobe; broncho-pneumonia of the left upper lobe of the right lung; acute bronchitis, tracheitis, laryngitis and pharyngitis; acute gastritis; acute splenitis and an acute fibrinous pleuritis of the left side.

Case II.—J. B., male, aged 33, admitted to Hospital January 11. Family history, good; personal history, always well. Uses alcohol moderately. Was vaccinated seven weeks ago. The scar does not indicate that the vaccination was successful and arm has not been sore. One week ago, or six weeks after vaccination, patient noticed small "water blisters" around site of vaccination. These blisters increased in size, spread over the arm and finally all over the body. On admission the temperature was 100 degrees. The man coughs occasionally, the expectoration consisting of mucus mixed with pus and shreds of epithelium and streaked with blood. On the backs of hands and feet are numerous bullæ, mostly discrete, varying in size from a split pea to a ten-cent piece, many of them having a narrow red areola. Between these lesions are a few scattered macules the size of a hemp seed. Over the inner aspect of the thighs and forearms are fewer but larger bullæ, some firm and tense and others flaccid. Over the upper and outer aspect of the left arm, all over the back and upper part of the abdomen and lower part of the chest are large weeping areas covered with loose macerated skin. There are also a dozen or more bullæ on the genitalia. About the nose, mouth and chin are thick, almost black, crusts, while the scalp is likewise crusted, evidently with the contents of broken down bullæ. The roof of the mouth and inner surface of the cheeks contain in all half a dozen bullæ about the size of a ten-cent piece. The whole of the pharynx, the pillar of the fauces and sides of the uvula are covered by a thick yellow coat of pus, which is easily scraped off. Owing to the condition of the patient no further physical examination could be made. Four days later the patient was much weaker. He had at times been delirious and his breathing was labored, though he took nourishment fairly well. Some new bullæ had appeared during this time, though in a general way the condition of the skin was about the same. For the next two days the patient was delirious most of the time and slept very little. He could take no nourishment and was rapidly growing weaker. On the 18th, seven days after admission, the patient died, having been unconscious for the last 12 hours of his life, during which time the breathing was very

labored, accompanied by tracheal râles. On the 17th, one day before death, he had a well marked chill at two in the morning and two in the afternoon. The temperature reached 103 degrees, its highest point, three days after admission. No autopsy was allowed.

Case III.—Mary B., aged 40. Family and personal history not obtained. Six weeks before admission was vaccinated. Her arm was never sore and was practically healed in three weeks. About this time a few small discrete blisters appeared on the front of the neck. These gradually spread down on the chest into the axillæ, downward along the arms, around the neck, over the shoulders and back. These vesicular lesions increased in size, became confluent and ruptured. Three weeks after the first vesicular lesions appeared, the patient was admitted to the hospital, having been confined to bed two weeks previously, during which time she had had two severe chills. Temperature at admission was 101½ degrees. Patient has great difficulty in swallowing and complains of weakness. On examination, the scalp is found covered with thick yellowish crusts. On the left forehead is a single flattened bulla half an inch in diameter with cloudy contents and no surrounding areola. The rest of the face is clear. In the axillæ and groins and on various other parts of the body are excoriated areas of varying shapes and irregular outlines, the largest covering an area of 5 x 8 inches. The floor of these areas is smooth, clean and flat, showing a tendency to granulate, and there is no inflammatory reaction about these areas, the surrounding skin appearing healthy. On the lower extremities, back and front, there are half a dozen discrete bullæ about the size of a ten-cent piece, half distended with cloudy serum. There are also a few of these small bullæ on the arms. None of these bullæ have an areola. I was fortunately able to get a good photograph of this woman's back before death and two of the body after death, and to save time I will not describe the appearances of these lesions further, but will show you the photographs, which, I think, speak for themselves. (Figs. 1 and 2.) No further physical examination could be made on account of the patient's condition. For a few hours after entrance, the patient appeared quite comfortable and took nourishment fairly well, but she suddenly became much weaker, her extremities grew cold, the pulse weaker, and she became cyanotic, dying at 3 P. M., about ten hours after admission. On autopsy, the soft palate, sides of pharynx, epiglottis and the mucosa of the larynx were found thickly studded with small round ulcers.

Each one presents a clean bright red base with red margins. Upon the under surface of the epiglottis these ulcers average about 2 mm. in diameter. They are in general discrete, though frequently confluent, forming irregular figures rendered conspicuous by considerable injection of their bases and margins. The process in the larynx and trachea is similar. It has advanced further here and large areas practically devoid of epithelium are seen covered with thick yellow-gray mucus, which in places is membrane-like and thickly adherent. The same process extends to the larger bronchi becoming more marked as we descend. The vagina shows numerous lesions similar to these found in the larynx. The anatomical diagnosis, in addition to the skin lesions, may be summed up as follows: Ulcerations of the mouth, larynx, trachea, bronchi and vagina; focal pneumonia, acute bronchitis and chronic fibrinous pleuritis of both sides.

Case IV.—Admitted January 21, 1902. Male, aged 21. Family and personal history good. Was vaccinated six weeks before admission to hospital, the area of vaccination having healed in about three weeks. Two days ago, or about 4½ weeks after vaccination, a few small blisters appeared on back of neck, also on right outer thigh near buttocks. These blisters rapidly increased in size and number and spread downward on back, shoulders and arms to the hands, also over chest and abdomen. Gradually both buttocks became involved and a little later both thighs and the legs and feet. These blisters varied in size from a ten-cent piece to a silver dollar, were ruptured easily and when ruptured left a tender, excoriated surface. The patient has a good appetite, sleeps fairly well and says the eruption itches slightly at times, though he refrains from scratching. Physical examination discloses a man well developed and nourished. On posterior portion of hard palate is an irregular shaped red area, slightly raised, but without vesiculation. Pulse regular, temperature 99 3/5 degrees; heart regular; lungs not examined, no further physical examination being made on account of thickly arranged skin lesions. Scalp clean. Forehead shows on either side irregular areas of redness with considerable crusting. The same condition exists on chin. On neck, front of body, arms and legs may be seen irregularly distributed bullæ, varying in size from a pea to a pigeon's egg. The bullæ are very thickly distributed, tense, and nearly all circular in outline. These bullæ are both discrete and confluent, all have sharply defined red areolæ, and some, especially on the arms and legs, are distinctly umbilicated, and when broken, evacuate a deep yellow clear

PLATE XXXII.—To Illustrate Dr. James S. Howe's Article.

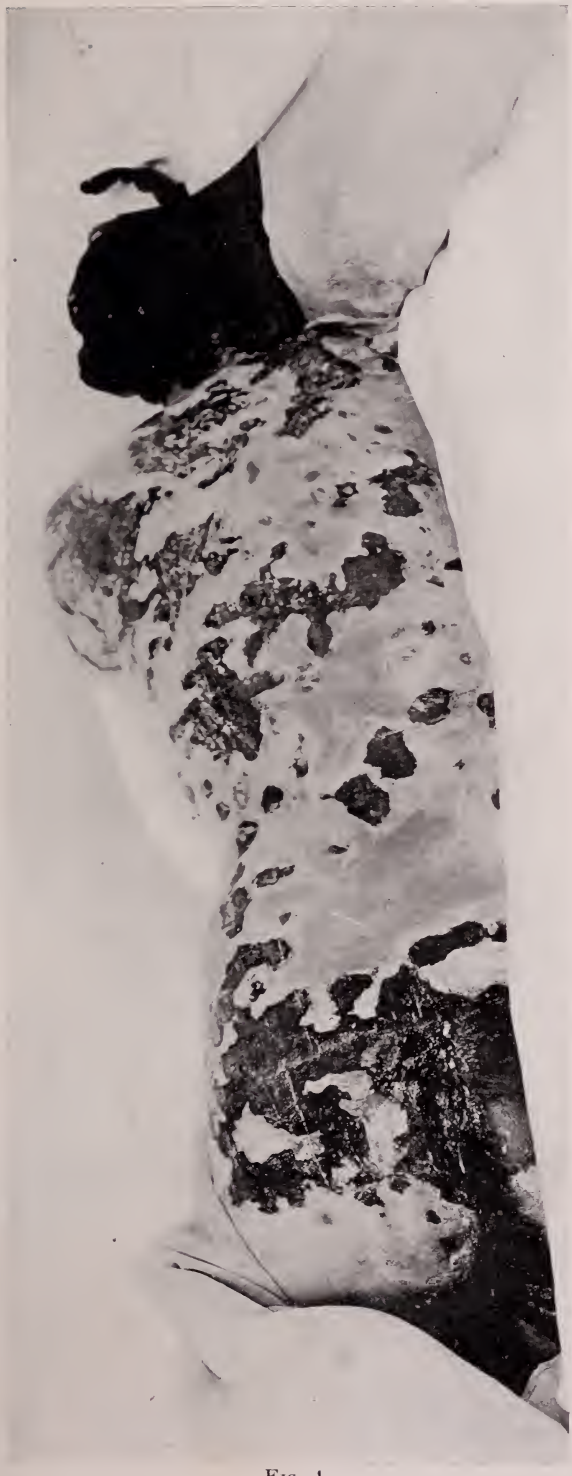


Fig. 1.



Fig. 2.

Fig. 1. Case III. Showing large areas denuded of epidermis which were produced by the rupture of large grouped bullæ. Taken at time of admission to hospital.

Fig. 2. Case III. Photo taken after death showing large excoriated areas previously occupied by large grouped bullæ.

PLATE XXXIII.—To Illustrate Dr. James S. Howe's Article.



Fig. 3. Fig. 4.

Figs. 3 and 4. Case IV. Back and front view showing the large bullous type of the lesions in an early cutaneous outbreak.

PLATE XXXIV.—To Illustrate Dr. James S. Howe's Article.



Fig. 5.



Fig. 6.

Figs. 5 and 6. Case IV. Front and back view showing smaller type of bullous lesions in one of the late cutaneous outbreaks in the same patient.

serum. The palms of hands and soles of feet are clear. Irregularly distributed over the body are areas (the sites of broken down bullæ) both discrete and confluent, red, slightly elevated, sharply marginated and moist. The intrascapular region and back of neck is one mass of these latter lesions, as are also the buttocks, but on the nates there are thick crusts. The penis is quite covered with small bullæ the size of a pea.

The temperature at admission was 100 degrees. Two days later, or the night of the 23d, the temperature was 103 3/5 degrees, the highest point it reached during the course of the disease. On the 29th, eight days after admission to the hospital, nearly all the bullæ had ruptured and here and there were small scattered areas of clean granulation tissue and many small areas of new epithelium scattered throughout. The back of chest was dry and scaly, many portions having healed, leaving slight brown pigmentations. The patient sleeps very little and is slightly delirious at times. There are no lesions in the mouth. Two days later, on February 1st, new crops of bullæ appeared on thighs and other parts of body previously affected excepting the back and buttocks. On the forehead over the healed areas a few small clear bullæ appeared with slightly reddened areolæ. On front of body are the remains of old lesions which are slightly thickened, pale red in color, entirely covered with new epidermis. Around the edges of these areas are numerous small discrete bullæ, an occasional vesicle being seen in the centre of the patches. By February 5, all bullæ and vesicles had disappeared, leaving the skin the same as before. Two days later, on the 7th, a new crop of bullæ appeared practically over the entire body. A week later, the 12th, the bullæ last appearing had entirely disappeared and at this time there was scarcely a square inch of skin on the body, excepting the palms and soles, which had not been the seat of a bulla. On March 1st, another crop of bullæ appeared, smaller in size than those previously noted and not nearly so numerous. On the 14th, a few bullæ appeared again on the body and this time the mucous membrane of the mouth and throat was invaded. These all broke down and by the 20th the skin, save for remaining evidences of the bullæ in the form of partly healed excoriations, was in pretty good condition. Ten days later a few more bullæ appeared scattered over the body and all were discrete. There were three more outbreaks of these bullous lesions, each one milder in type than its predecessor, and the patient was discharged practically well on May 5th, having been in the hospital four and one-half months.

Case V.—Male, aged 35. This man was admitted on February 19th. Family history negative. Patient's history good; though he was a moderate drinker. Was vaccinated January 7th. One week ago, or about five and one-half weeks after vaccination, a few small blisters appeared about the lips, which itched and burned. The patient scratched these lesions and similar lesions rapidly appeared on the rest of the body. He went to bed the next day and has remained there since. Two days before admission blisters appeared in the mouth, causing considerable discomfort, rendering deglutition painful and difficult. Physical examination reveals a well-developed and nourished negro. Respiration is slightly increased and temperature 103 1/5. Upon the neck, head, eyebrows, eyelids, nose and ears, upon the flexor surfaces of elbows, about the clavicle and axillæ, upon the shoulders, around the genitals, upon the flexor surfaces of thighs, and in the popliteal regions are seen bullæ for the most part unilocular, but with a tendency to coalesce. They are filled, as a rule, with a transparent serous fluid, while the contents of some of them are cloudy, resembling thin pus. These lesions vary in size from a pea to a half dollar. In the flexures the lesions show a tendency to coalesce. There is a large excoriated oozing area just above the right clavicle and a similar one on the inner aspect of the left thigh. There are many bullæ on the back, especially about the buttocks and shoulders. There is some conjunctivitis with a sero-purulent discharge. An examination of the throat shows on the anterior part of the soft palate some broken-down bullæ, while similar lesions are to be seen on the posterior wall of the pharynx. On February 23d, the patient was unable to swallow, owing to condition of the throat and nutrient enemata were given. On February 27th, the patient was much better, the lesions in the skin and in the mouth are clearing up. On March 3d, there was still further improvement, but there are large, painful, excoriated areas in the axillæ and popliteal spaces as well as inside the thighs. On March 12th, his temperature, which had been for several days about 100, ran up to 100½ and bullæ appeared in the mouth and in the pillars of the fauces. The odor from the mouth was very foul. March 20th, the lesions on the body had practically healed, with the exception of those in the axillæ and behind the knees. The condition of the mouth is much improved. On April 2d, no bullæ could be seen, but there were some broken-down glands in the right axilla and he still has an ulceration in the right side of his mouth. April 20th, the patient was out of doors daily and the mouth is practically all healed. He was discharged well on April 28th.

Case VI.—Male, aged 47, was admitted to the Hospital March 30th. No family history. Patient has always been well and strong and uses alcohol moderately. Was vaccinated six weeks ago; 20 days after vaccination he had a swelling of lower jaw, accompanied by neuralgia. Says he has no teeth on that side to cause trouble. A week later, or four weeks after vaccination, small blisters began to appear on the forehead. From here the trouble spread to the face, neck, and shoulders, two or three days after their first appearance on the forehead. Has had sores in the mouth for the past two weeks. The disease spread rapidly all over the body from the shoulders, some of the blisters being very large before they were broken down by the pressure of his clothing.

Physical examination reveals a poorly developed and badly nourished man. Temperature 101 3/5. On inside of cheeks are small denuded areas, though none can be seen in the pharynx. Teeth are very poor and loose and gums are of a grayish color and spongy. An examination shows crusts and small excoriated areas about the eyes, over the body and extremities, about the neck, above the clavicles, on the maxillæ, in fold of buttocks and flexures of knees are large denuded areas, some of which have extended through the skin into the fleshy parts. These areas vary considerably in size, the largest being in the axillæ and above the right clavicle, while the deepest are in the flexures of the knees and the folds of the buttocks. No fresh bullæ can be seen. Scattered over the legs and forearms and on various parts of the body are small areas which have nearly healed. The heart, lungs and abdomen are negative on superficial examination. April 2d, patient is very uncomfortable. The eyes are painful and lids are glued together by a muco-purulent secretion. The throat is very sore and the vocal cords are evidently affected, as patient can scarcely whisper. Nutrient enemata are taken well and retained. Sleeps very little and is very weak. April 4th, five days after admission, he is fast growing weaker, failing to respond to stimulation. For the past four days the morning and evening temperature has been sub-normal. The patient died at 11.30 P. M. and no autopsy was allowed.

Case VII.—Admitted to the Hospital March 26th, male, aged 27 years. Family history good. Patient has always been well. Was vaccinated five weeks ago; arm was slightly sore for several days, but patient was told it did not take. One week ago, or four weeks after vaccination, a few small blisters appeared on chest; three days later

blisters increased on the chest and made their appearance on the pubes and penis and inner aspect of both thighs. These lesions itched slightly. Says he has had three chills during the past two or three days; feels hot and very thirsty; there is no vomiting or sweating. Patient says it hurts him to swallow, but his mouth is not sore.

Physical examination reveals a well developed and well nourished man; pulse is fairly regular, with good volume and tension; temperature, 101½; heart area within normal limits, its action being regular and sounds clear, no murmurs being heard, resonance of the lungs is good throughout; respiration is slightly harsh at both apices behind; otherwise good; no râles heard. Scattered over the whole surface of chest and abdomen are many circular excoriated areas of all sizes from a split pea to a ten cent piece. Among these areas are some small bullæ, most of them about the size of a dime, unilocular and umbilicated; some small bullæ scattered over the cheeks, about pubes, root of the penis and inner aspect of both thighs, and many excoriated areas, with small bullæ scattered among them. There are several large bullæ, one or two of them the size of a half dollar on thighs and lower legs. There are excoriated areas at angle of neck with body. There are no lesions on the back or about the eyes; no conjunctivitis.

Four days later patient complains of his mouth, which he says is very sore. Examination of the mouth reveals bullæ the size of a ten cent piece, several in number, situated on the inner side of the cheeks and the walls of the pharynx.

Three days later many small bullæ have appeared in the flexures of the elbow, also in the axillæ. Those in the axillæ are closely grouped and cover an area the size of the palm of the hand. Mouth is ulcerated and he has considerable difficulty in talking and swallowing. Patient has had steady diarrhœa for the past three days and the stools contain dark clotted blood.

The next day lesions in the flexures of elbows and axillæ had coalesced to some extent and new bullæ had appeared the size of a half dollar.

April 5th, there are severe but not very deep ulcerations just inside both lips. There is a deep ulceration in the angle of the left lip on the inside, running back as far as can be seen. Owing to the difficulty in swallowing food, patient has been fed for the last three days by the rectum, but there is so much diarrhœa this has had to be stopped.

April 6th, stools still contain blood clots. Mouth is much worse

and lips more swollen than at last note. Patient sleeps very poorly and seems to be growing weaker.

April 10th, mouth is so sore that nutrient enemata have been resumed for the past three days. Some food is still taken by the mouth, and bloody stools still continue.

April 14th, mouth gradually growing better; diarrhœa is checked; patient is much stronger and better; can talk now with very little difficulty and takes all food by mouth.

April 18th, general condition greatly improved; eats and sleeps well; bowels normal.

April 22d, up in chair, wrapped in blankets; still some ulceration in mouth, but this condition is much improved.

April 26th, mouth is almost healed. Complaints of pain in perineum, and examination reveals an abscess.

May 1st, mouth contains a few small ulcerations, lesions on body being entirely healed. There is a glandular swelling in the middle of the left arm and small abscess on left thigh. At this time the patient was transferred to the surgical wards, where he made an uneventful recovery.

Case VIII.—Male, aged 52 years, admitted April 9th. Family history negative; patient's history good, excepting that he uses alcohol to excess. Was vaccinated December 15th; arm was quite sore for two weeks and was told by his doctor that he had a very good take. On the second week in March, small vesicles appeared on the forehead; two days later blisters began to appear on the neck and shoulders, on the pubes and between the thighs. These rapidly became larger and broke of themselves, to fill up again according to the patient's statement.

Four days later the disease rapidly spread all over the legs and appeared on the arms; some itching at first stage of the disease, but little or none since. Mouth is not sore, and he complains of pain only when lying on the excoriated surfaces.

Physical examination reveals a well developed and well nourished man. Face is reddened, with some crusts scattered over it; over the body are scattered large bullæ varying in size from a ten cent piece to a dollar with clear serous contents. These bullæ are especially numerous on the extremities, below the elbows and mid thighs, where in many places they have coalesced. There are also some crusts the size of a quarter scattered over the body. The middle of the back and buttocks are almost denuded of epithelium and much reddened.

There are minute vesicles inside the lower lip, with clouded contents.

April 13th, since second day after admission bowels have been loose and the discharges contain dark masses of clotted blood. Since entrance perhaps a dozen or fifteen large bullæ, the size of a half dollar, have appeared on various parts of the body. There are no lesions in mouth or throat. While taking a bath to-day, the patient collapsed and was carried back to bed unconscious but was revived with stimulants.

April 15th, bloody stools continue; lesions on body have been healing rapidly and there is no evidence of any new ones. His appetite has been good the past two days and there has been no further vomiting. Patient was apparently perfectly comfortable on the afternoon of this day, when he suddenly collapsed and died.

Autopsy reveals acute bronchitis, broncho-pneumonia, diphtheritic colitis, and proctitis, interstitial hepatitis and œdema and congestion of the brain.

Case IX.—Admitted April 30th, male, aged 33. Family history negative; patient's history good, but uses alcohol in moderation. Was vaccinated six weeks ago. Three days before admission noticed slight itching between the shoulder blades. On examination found group of blisters on the back, perhaps 20 or 30 in number; that night awoke with itching about privates. On examination found 50 or more small blisters about the size of a split pea. There has been considerable discomfort from itching.

Physical examination reveals a well developed and nourished man, but he is undoubtedly addicted to the excessive use of alcohol. The eyelids are closed and much swollen and the lids are glued together with thick purulent discharge. On eversion of the lids there are revealed several small ulcers about the size of a split pea. On the back of the neck and across the shoulders closely grouped are about 50 bullæ varying in size from a split pea to a quarter of a dollar, some of them having hemorrhagic contents. The same condition of affairs exists across the front of the chest. In both axillæ there are 25 or 30 bullæ about the size of a ten cent piece; on the inner aspects of both thighs extending down nearly to the knee are large groups of bullæ varying in size from a split pea to a quarter of a dollar; there are numerous bullæ of various sizes scattered over the arms and lower legs. The symmetrical arrangement of the eruption is quite marked, the regions affected being the space across from shoulder to shoulder behind, from shoulder to shoulder in front, the axillæ, the inner aspects of both thighs and the popliteal spaces behind.

On May 3d, the process has extended very rapidly since admission; the entire trunk is now covered with bullæ varying in size from a split pea to a silver dollar; many of the lesions have ruptured, particularly on the shoulders and back.

May 7th, all the bullæ have broken and the entire abdomen is covered with excoriations, as are also the hips, shoulders and back, the surface being raw and oozing. In the mouth between the lower lip and gum are two or three small patches of denuded mucous membrane. Patient has been able to eat fairly well.

May 10th, skin on the whole trunk and thighs is practically denuded of epithelium, bleeding and very painful. No new bullæ have appeared.

May 18th, all bullæ have entirely disappeared, but there are many raw areas, especially about the upper arms, axillæ and buttocks. These areas are clean and epithelium is fast filling in.

May 22d, still large denuded areas on inner sides of arms; less extensive ones on shoulders and buttocks; sitting up to-day in chair, wrapped in blankets.

May 27th, denuded areas are almost entirely healed, excepting a small patch on the inner side of both arms and right hip. Patient was discharged relieved.

Case X.—Male, aged 47 years, admitted January 9th. Family and patient's history not obtained, though the man was undoubtedly very much addicted to the use of alcohol.

Physical examination reveals slight glandular enlargement of the neck marked on right side; pupils equal; react normally to light and accommodation; conjunctivæ and corneæ injected; purulent discharge from both eyes; lips thickened and cracked; mucous membrane of mouth pale; tonsils swollen and congested; uvula injected. There is a small patch of membrane on each tonsil and on back of uvula; a few sibilant râles in both lungs.

Culture taken from the throat reveals the presence of diphtheritic bacilli. The skin is covered with bullæ of various sizes, the largest being the size of a silver dollar; these bullæ are larger and more profuse on the body and lower extremities; some have been broken and leave raw, red, excoriated areas. Some of the excoriated areas present are beginning to heal. This patient was vaccinated, probably successfully, eight weeks ago.

January 10th, patient has much tremor of the muscles and is at times delirious; several new bullæ have appeared from the size of a

ten cent piece to a silver dollar. These bullæ are easily ruptured, leaving a moist excoriation, and the odor of the exudation is extremely unpleasant. Antitoxin was administered to-day.

January 11th, patient seems to grow much worse; is more delirious; has a tendency to fight and rejects all nourishment.

January 12th, patient did not sleep at all last night and grew rapidly worse in spite of care and treatment. Patient was extremely violent during the night and died at 8.30 in the morning from a septic condition of the lungs due probably to the skin lesions. No autopsy was allowed.

I regret that the large number of these cases I have had to report and the length of time given by this Society for the reading of a paper has made it impossible to describe these cases more fully. Such a description of them as I have given is totally inadequate to present to you a true clinical picture of the disease. To sum up these cases briefly, I may say that they were all cases of bullous dermatitis, all but one occurring in patients who had been recently vaccinated. The average duration of the disease in these ten cases was six weeks from the time the first skin lesions appeared until death or recovery took place. The longest duration of the disease in any one case was 16 weeks, followed by recovery, and the shortest was one week, followed by death. The skin lesions began to appear in these cases in an average of five weeks after vaccination, 16 weeks having elapsed in one case, the longest, and three weeks in one case, the shortest time between the time of vaccination and the first cutaneous disturbance. In the ten cases which followed vaccination there were six deaths, a most extraordinary mortality. In all the cases the parts most often affected were the back of the neck, the region between the shoulders, the axillæ, the buttocks and the inner aspect of the thighs, and in these places there was a noticeable grouping of bullæ. The odor in all the cases was intensely disagreeable, but subjective symptoms were practically absent, though the extensive excoriated areas made all movement painful. The lesions in the mouth and pharynx made deglutition painful and often impossible, while corresponding lesions in the trachea produced an aggravating cough.

There are several questions which naturally arise in regard to these cases: What was the cause of the disease? Was it the result of vaccination? Was it the result of infectious material introduced at the time of vaccination? Was it the result of infectious material introduced into the vaccination wound after vaccination? and

what name should be given to these cases? As to the cause of the disease, I am not prepared to give any decided answer. Was it the result of vaccination? It seems curious that there was apparently an average incubation period, as we might call it, of five weeks from the time of vaccination to the appearance of the skin lesions. In no one of these cases was there any lymphangitis or any signs of sepsis, and the scar resulting from the introduction of the vaccine virus gave evidence that only one or possibly two of the cases had produced immunity from smallpox. So far as could be learned, animal lymph was used in all these cases, and it undoubtedly came from a trustworthy source, and with possibly one or two exceptions the vaccination was done by physicians appointed by the Boston Board of Health. Bowen some years ago published an interesting series of cases of bullous dermatitis following vaccination; but these cases occurred in children and none of them were fatal, and the trunk as a rule was free from the bullous eruption, while in all of these cases the trunk was markedly affected. In his cases there was an apparent incubation period, if we may call it so, of two and one-half weeks, while in these cases I report it is double that length of time.—*i. e.*, five weeks. The constitutional disturbance in his cases was trivial, while in these cases of mine it was very marked, the average temperature of these cases while they lasted being in the evening about 101 degrees. In Bowen's cases he says, in summing up, that "It is not improbable that a toxine developed by the vaccination in certain predisposed individuals is responsible for the cutaneous appearances." Was this disease the result of infectious material introduced at or after vaccination? While there is no scientific proof of such an assertion, I am of the opinion that such was perhaps the case. Why is not such an assumption plausible in the face of such grave constitutional and cutaneous symptoms and a record of six deaths in ten cases? Lastly, what name shall we give to these cases? For many reasons I should not call them cases of dermatitis herpetiformis. On the other hand, it might seem more proper to call them, perhaps, cases of pemphigus. Quoting Duhring in regard to pemphigus, I will refer to the following: "The mucous membranes of the mouth, pharynx, epiglottis, arytenoid cartilages, trachea, bronchi, vulva, anus, and even of the alimentary canal are not infrequently invaded, especially in the varieties *malignus* and *vegetans*, giving rise to varied local lesions, mostly whitish patches and excoriations. In grave cases there are pain and difficulty in breathing and swallowing, diarrhœa, exhaustion, collapse,

and a fatal ending." These cases of mine certainly showed all these symptoms. I present this brief outline of these cases only as a preliminary report, intending in the near future to report and discuss them in full.

SYPHILIS AND THE MEDICAL SECRET.*

By Prince A. Morrow, M.D., New York.

IT is hardly necessary to impress upon the physician the obligation of secrecy in relation to any information of a patient's condition confided to him in the exercise of his profession. This obligation, which was formulated in the precepts of the Hippocratic oath, has been accepted as the truest and finest expression of the physician's duty to his patients and has been approved by the wisest and best of medical men in all ages. The observance of this code of duty is the primal professional virtue; and is universally recognized as the basis of all relations between the physician and patient.

No matter what theories or dogmas have divided medical men in opinion or created separate sects or systems of practice, the medical profession, with a remarkable unanimity, has remained faithful to this code of duty. Even the least scrupulous of medical men who fail woefully in their ethical duty to their confréres recognize the binding character of this obligation to their patients. Physicians may violate every principle of right and decency toward a fellow practitioner—may disparage and belittle his reputation and injure his practice—all this may be excused or condoned on the ground of professional rivalry, but the medical secret is regarded as sacred and inviolable.

In relation to venereal diseases, from their essentially private nature and, especially, their "shameful character" in popular estimation, the obligation of secrecy takes on a more rigorous and peremptory application. They are the diseases of all others which the patient would not wish revealed, and it is evident that a knowledge of their existence would not be confided to the discretion of the physician if there was any risk of it being divulged. It is only by virtue of this tacit, though well understood contract that the confidential relations between physician and patient are established and maintained.

To the force of traditional custom the law has also added its weight of authority by making the violation of the professional secret

* (Read before the Am. Dermatological Association; Am. Congress of Physicians and Surgeons, Washington, May 12, 1903.)

a penal offense. But the law evidently considers the common interests of the social order superior to the interests of the individual, since it has made it obligatory upon physicians to report all cases of contagious diseases which are regarded as dangerous to the public health. This compulsory notification is justified since it is the basis of all prophylactic measures for the protection of the public against these diseases. Doubtless the intent of the notification laws is to include within their scope all disease which are recognized as contagious and dangerous to the public health. Venereal diseases fulfil both of these conditions, but they are exempted from declaration chiefly because of their difficult and baffling character as a sanitary problem.

The French law even compels the violation of the medical secret in decreeing that "the physician who knowingly leaves a nurse in ignorance of the dangers to which she exposes herself in nursing an infant suffering from congenital syphilis may be declared responsible for the prejudice caused by his reticence." It is obvious, however, that the physician cannot disclose the nature of the disease with which the child is affected without revealing the secret that one or both parents are syphilitic.

In Norway and Denmark the declaration of venereal diseases is made obligatory by the law, and while the information is kept secret by the sanitary authorities, it has proved to be one of the best measures for the prophylaxis of venereal diseases, as it has enabled the authorities to locate dangerous sources of contagion and subject them to surveillance and treatment. Doubtless it is only a question of time when the registration of venereal diseases by our Sanitary Bureaus will be generally adopted.

In the ordinary treatment of syphilis the physician finds it easy enough to adjust his line of conduct in strict accordance with his code of professional duty, as in such cases the individual interests of the patient alone are involved, but when a syphilitic consults a physician in regard to his marriage, the situation is changed, the interests of others may be jeopardized. His protective duty extends to the wife and future children, and through them to society at large.

It often happens that the special obligations imposed upon the physician to protect the interests of his patient are opposed to and irreconcilable with this larger social duty to preserve others from infection. There thus arise many situations in which the question of professional discretion obtrudes itself and therein the physician perceives a divided duty.

In many cases when the patient applies to the physician for advice in regard to the propriety or safety of his marriage, he does so with the honest intention of accepting and abiding by the physician's decision. The chief rôle of the physician is to explain the significance of the disease, the dangers it might entail in married life, the necessity of treatment and the period necessary to wait before his marriage can be sanctioned as safe. However onerous these conditions may be and however prolonged the prematrimonial probation, the patient yields a more or less ready assent.

There is another class of cases, unfortunately not rare, in which the man fully instructed as to the dangers he would carry with him into married life, will not forego a contemplated marriage despite all representations the physician may make as to the danger of infecting his wife and children. He will plead an engagement from which he cannot honorably retreat, arrangements completed for the marriage, pecuniary or other selfish interests that would have to be sacrificed—pretexts as numerous and varied as are the motives that influence men to matrimony. He resolutely refuses to forego the marriage. To the physician's advice to wait until he is cured when he can enter the marriage safely and honorably, he will perhaps urge that delay would mean the defeat of his matrimonial projects. The physician's appeal to his honor, the denunciation of his action as base and criminal, do not shake his determination. It is precisely in situations such as these, in dealing with this type of conscienceless criminal—for it is a moral if not a legal crime for a man to risk giving syphilis to a woman who accepts him as her husband—that the professional secret introduces a complicating element which renders the physician's line of conduct extremely difficult in view of the opposing interests involved.

On the one hand there is the duty to protect the confidence of the patient who has consulted him relying upon the traditional assurance that this confidence is sacred and inviolable; on the other an innocent woman, it may be the cherished idol of her parents, who is to be the victim of a most odious injury, the supreme insult that a virtuous woman can receive, to say nothing of the injury to her health and the destruction of her offspring.

The Hipprocratic oath enjoins, "My tongue shall be silent as to the secrets which are confided to me and I will not use my profession to corrupt manners or *aid crime.*"

Here is a crime contemplated but not yet consummated, without malice, it is true, but none the less wilful, and from the basest and most sordid motives. The prospective victim is most often a pure

young woman, confiding in the love and honor of the man who is about to do her this unspeakable wrong.

By the accident of his professional relation to this man the physician happens to be the only person who can prevent the consummation of this crime, as he is the only confidant. Does not his silence and inaction make of him an accomplice, a *particeps criminis?* The remorseful self-accusation of Paul was that "I was also standing by and consenting unto his death and held the raiment of them that slew him." Is not this paralleled by the attitude of the physician who stands by and guards the dissolute secret of the assassin? A single word to the family physician or natural protector of this woman would save her from this terrible fate, yet the physician is fettered hand and foot by his cast-iron code, his tongue is silenced, he cannot lift a finger or utter a word to prevent this catastrophe. His code shields the criminal more effectively than the most solemn personal pledge. The very name and nature of the disease gives an added significance to the physician's obligation not to reveal it.

If it were a taint of insanity, of cancer, of leprosy even, it might be hinted at or indirectly revealed, but syphilis never.

Another aspect of the situation may be considered which has been literally duplicated in practice. The intended victim is also a patient of the physician. He has brought her into the world, her family have been lifelong friends and patients—but this does not alter the situation. The professional code marks out and strictly limits his line of conduct. Ethically he has no more right to intervene than if she were a complete stranger. He cannot apply the knowledge of a person he has gained in his capacity as a physician to protect one who may be as dear to him as a member of his own family.

There are no circumstances in the entire range of a professional man's experience so painful as to recognize himself powerless to prevent the morally culpable union of a syphilitic man and an innocent woman. There is no situation in which the arbitrary restrictions of a code of conduct based upon professional secrecy seem so opposed to the voice of conscience and the dictates of humanity as the one under consideration. To protect the man, he feels to be odious, immoral and culpable, to protect the woman would be manly, humane and just. The inspiration of his conscience cries out against the former duty, every noble instinct of his nature would be enlisted in the latter duty.

What has been termed the "eternal problem" of the professional secret has long engaged the thoughtful attention of medical men.

Like all problems connected with the prophylaxis of venereal diseases it is exceedingly complex and baffling. It may be said that no solution of these problems has ever been proposed, no plan of action for the regulation or control of these diseases has ever been formulated which does not come in conflict with individual liberty, legal rights or moral principles. There is always an irreconcilable conflict between the sanitary and other interests involved.

Now it will be admitted that it is distinctly a sanitary duty to guard against the introduction of venereal diseases into marriage, because they compromise the health of the wife, the existence of the children she might bring into the world, and through them the interests of society. But it would appear that the higher duty of the sanitarian to preserve others from infection falls below his duty as physician to protect a wretch in infecting them. Not only the interests of the many are sacrificed to the interests of the individual, but the innocent are made to suffer in order to advantage the guilty. The law which backs up and supports the sanitarian in his efforts to control and limit the spread of contagious diseases in general here intervenes in favor of the spreader of disease. It sets its seal of silence upon the secret of the individual which cannot be broken—under penalty of the law.

It would simplify the situation if the physician could accept and act upon Dogberry's charge to the Watch in "comprehending vagrom men":

"You are to bid the man stand in the Prince's name."

"But if he will not stand?"

"Then let him go his way and thank God that you are rid of a knave."

But does not the advice of a distinguished authority have the same exquisite Dogberrian flavor? "Tell him plainly the truth, show him that he will commit a crime in marrying, and if it is seen that he will not be convinced, dismiss him brusquely, as you would dismiss an assassin."

Practically, however, it is to this inane rôle that the physician is reduced through the alienation of his liberty of action by his professional code.

In this connection it will be interesting to compare the views of different writers upon this aspect of medical deontology.

Langlebert gives the following case: "The father of a young woman asks information relative to the health of a young man (your patient) who is engaged to his daughter. 'I wish to ask under the seal

of secrecy certain details as to his malady. I beg you to say whether I can or cannot accept him as a son-in-law. I hope that you will take into consideration the embarrassment of a father placed between the desire to give his daughter the husband of her choice and the fear of the results the marriage may have if the hints that have been given me are unfortunately true.' "

"In the case given above," says Langlebert, "should the physician, entrenching himself behind the Hippocratic oath and the prescriptions of the law, guard an absolute silence, or only interrogating his conscience, should he make it the judge of the secret confided to him, to divulge it, or be silent, according to circumstances?"

Commenting upon this case, Dr. Gaide says, "If a client affected with constitutional syphilis, which resists all treatment, does not fear to solicit the hand of a pure young woman, who is the joy of her family—if the father of this young woman comes to demand of me in confidence, if he can in all security give her to this man who would soil her by his first contact and leave her as her only consolation children affected by his malady, shall we respond with a silence which may be misunderstood and thus render ourselves accomplices of a marriage the fruits of which will be so deplorable? Never would I have the courage to obey the law under such circumstances. My conscience would speak higher than it, and without hesitation I should say, 'No, do not give your daughter to this man,' and I would not add another word."

Langlebert indicates the physician's rôle as follows: "I regret that I cannot give the information you ask. The best you can do, if you intend to carry out this project of marriage, is to inform the young man of the warnings you have received or have him come with you or send me a writing by which he authorizes me without restriction to say whether he can or cannot espouse your daughter.

"The physician ought to interdict all kinds of information as to the health of a patient on the occasion of marriage, as a professional principle, an invariable rule of conduct, he should take refuge behind the proscription of the law.

"The alternative is cruel, it requires a certain courage in such cases for the physician to remain master of himself and faithful to his duty.

"If it be a misfortune to society it would be a much greater damage to permit the enfeeblement of the tutelary principle of the medical secret which is one of the necessities even of the social order."

Juhel Renoy maintained that it was not only lawful but even com-

pulsory for any doctor who was a man of honor and courage to oppose and even denounce any criminal projects his patients might entertain in regard to marriage. He cites two instances in which he had undertaken the cause of young girls who were about to fall into a trap of this kind and as his patients were without conscience, and had refused to listen to the moral reason he adduced, he had declared that he did not feel bound to secrecy toward them any longer and that he would either go or send to the parents of the young women and warn them. Under this threat one of these marriages was broken off, but a more direct interference was required in the other. He sent for the girl's father by one of his confréres and replied without hestitation to the question put to him, "No, sir; do not marry your daughter to Mr. X.," with so much emphasis that the marriage was broken off.

Jullien, commenting upon his confrère's action, says: "If the result was fortunate the method employed was detestable." "It was treason, perpetrated with the 'best intentions,' but still a treason, for it is all very well to say the patients were warned but it was not until they were no longer masters of their secret which no doubt would not have been revealed if they had known what use was going to be made of it; strict duty would have required that before receiving this confidence our confrère should have warned the parties interested that he would publish the information if he saw fit."

Jullien reports with evident approval how an old practitioner, Dr. Piogey, solved this troublesome problem.

A young girl whom the doctor had brought into the world, of whose family he was a personal friend, and who was beautiful and charming was about to be married. The Doctor knew the intended bridegroom. He had attended him and attends him still for a terrible, incurable, contagious hereditary disease. To a man so afflicted to marry was not only a bad action but a crime—a really moral and physical murder. The Doctor went to the young man. He showed him the infamy of his conduct. But he had to do with a "struggler for life," who replied coolly that he cared little or nothing for the girl, but she was rich and would save him from ruin, and all that he could promise was to content himself with her money only. What was to be done? The rule of the profession is strict. Even in such a case the Doctor could not break it. The scoundrel knew that and told the Doctor so. "Very good," replied the Doctor, "but since you are unwilling to leave your prey I will snatch it from you. If you do not break off this marriage to-morrow, I will strike you in the

face at the Opera." The courage of an honest man overcame the coward and the marriage was broken off. While this action on the part of the Doctor was unquestionably chivalric, it is too Gallic and melodramatic to be imitated in our Western hemisphere.

Thibierge, who proves himself in his recent work (*Medical Deontologie et Syphilis*), a stanch upholder of the absolutism of *le secret médical*, admits "that this obligation weighs heavily upon the physician who in submitting to it is placed in the impossibility of preventing syphilitic contaminations, often multiple, in not being able to prevent the syphilitic from marrying. The medical man feels the obligation to guard the secret troubling his conscience and he regards himself almost as an accomplice in an action which he justly esteems criminal, since the syphilitic will not fail to contaminate the wife; in such circumstances the law appears to him odious, and seems to have been made mainly for the purpose of protecting particular interests, and among them the least respectable of all—the general interest seems to be sacrificed. The physician, in his revolt against the law, may be tempted to yield his obligations to the cry of conscience, forgetting that in the language of a distinguished magistrate, "no one is sufficiently sure of his conscience to put it above the law." Nevertheless Thibierge contends that while the more obvious intent of the law may seem to be for the protection of the individual, yet in reality its ultimate result is in the interest of society, since the enforcement of the obligation of the medical secret constitutes the indispensable condition as well as the most efficacious means for the public prophylaxis of syphilis. He reasons as follows:

"If the medical secret ceased to be imposed and the syphilitic could not count upon the silence of the physician, he would take care not to address himself to the conscientious physician, but betake himself to the charlatan, whose silence he could purchase, or, for greater security, he would treat himself or not be treated at all.

"Others, honest but timorous, having the impression that a syphilitic man can never marry—might mistake a simple venereal accident, easily cured, for syphilis, and consequently remain celibates.

"Others, again, suffering from a benign syphilis, held back by the fear of confiding their secret to a physician, would not be treated at the beginning of their disease and seeing all manifestations disappear completely, would imagine themselves cured and marry and infect their wives. Finally, old syphilitics who had had the disease many

years previously, not knowing that it was safe for them to marry, would remain single.

"The disadvantages resulting from this relaxation of the medical secret would be, both for individuals and society, much more numerous and frequent and altogether quite as grave as those which it is designed to prevent."

It will be admitted that there is much truth in this line of argument. The venereal patient, and especially the syphilitic, is a timorous creature. He is keenly alert to any circumstance that might suggest a suspicion of his disease. He scents danger of exposure where none exists. He often neglects to give his name or address to the specialist he consults. He looks askance at any prescription, fearing that it may give a clue to the nature of his disease, and he will go to an out of the way pharmacy to have it filled. The slightest intimation that his secret would not be held sacred by the physician under any circumstances would drive him away.

Under such conditions the valuable protective service which physicians are now able to render society by enlightening venereal patients as to the dangers of their disease and by dissuading them from their projected marriage until time and treatment render such a step safe, would be sacrificed.

When we come down to the question of practical results, even assuming that the obligation of the medical secret were entirely abrogated, and that the sanitary duty of the physician in excluding venereal diseases from the marriage relation was as plain as that of the Health Board in excluding trachoma and other contagious diseases from the public schools, what could be accomplished?

In the first place in the larger proportion of cases syphilis is introduced into marriage from extraconjugal infections, contracted *post nuptias*. Here it is evident that the preventive duty of the physician could not be exercised.

In the next place in many cases the specialist consulted often knows nothing of the parties interested, neither the name or address of the intended victim, or of her natural protector or the family physician—all may live in a distant city. He could not utter a word of warning, even if such interference were justifiable.

Finally, few patients when enlightened as to the serious and dangerous consequence of a premature marriage, brazenly avow to the physician their intention of carrying out their criminal intent, despite his warnings. One "will see about putting it off," another "will

consider the matter," another will remain silent, and while the physician may be morally sure that the man is secretly but none the less resolutely determined to carry out his purpose, he cannot take any step to guard against an act on the part of the patient the intention of which may be distinctly disavowed.

After weighing all the arguments pro and con, after studying dispassionately the practical results which would follow an innovation upon the established principles which guide professional conduct in relation to the patient's confidence, we are forced to the conclusion that the solution of this problem must be found in some other way, *in any other way* than in removing the old landmarks. We may justify ourselves in ignoring particular cases in which both conscience and humanity cry out against our silence and inaction by the consideration that in taking a broader and more general view, the larger interests of society, the greatest good of the greatest number, will be best promoted by remaining faithful to the traditions of the professional code. But the physician will fail in his duty if, in his endeavor to prevent the premature marriage of a venereal patient, he does not use every argument, appeal to every motive, play upon every chord of sensibility, and, if necessary, denounce the cowardice and criminality of an action which exposes the innocent to infection with all its train of physical woes.

While the obligation of the medical secret is in the general interest of the social order and should be maintained as a fixed principle of professional conduct, it may be admitted that a situation of a peculiarly aggravating character may present itself when the patient shows himself an exceptional sort of brute by the obstinacy with which he adheres to his criminal purposes after he is assured that he will almost certainly infect his wife—in such a case the physician, knowing all the circumstances and fully appreciating the tragic significance of such a step, must be guided by his own lights and conscience. If he should consider the criminal intent of this monster as entirely without the pale of professional protection and refuse to stifle his own feelings as a man of heart and conscience, who shall condemn him? Such a man is far more likely to prove loyal to the highest ideals of ethical duty in his relations with his patients in general, than the man who views these social catastrophes with a coldblooded indifference, disclaiming all personal responsibility and considers that in guarding the dissolute secret of his patient he is doing his whole professional duty.

Various expedients have been suggested which would permit the exercise of the physician's protective duty, while the time-honored principles of professional conduct are still preserved intact.

M. Brouardel, whose work (*La Secret Médical*) embodies the most elevated conception of the rôle of the physician in relation to professional confidence, thinks that in cases of this character a subterfuge is legitimate. Thus, "interrogated upon the health of one of his patients whom he knew to be syphilitic, he advised the father of the young woman whom he had asked in marriage to exact that his future son-in-law should take out a policy of insurance upon his life, the syphilis revealing itself by accidents so apparent, that the young man in question would not dare undergo the medical examination preliminary to the granting of the policy."

While the acceptance of a risk by a life insurance company may be regarded in some respects as a certificate of present good health, yet it would prove delusive as a guarantee against syphilis. In cases where the disease is recent or revealed by manifestations actually present at the time of examination, it might be detected, but in an interval between the outbreaks the patient even in the first year of his disease may present no incriminating evidence. In this country at least there is no uniformity in the principle adopted by life insurance companies in taking their risks. Some depend upon the results of the medical examination made at the time of the application, and others upon the truthfulness of the answer made by the applicant. The records of life insurance companies would be very misleading as a basis for estimating the prevalence of venereal disease in any country. As one examiner states, "This company apparently has a very virtuous set of members who have been remarkably free from venereal lesions."

The fathers of young women are censured for being largely responsible for the evils under consideration. It is claimed that it is a father's duty to satisfy himself of the health as well as the social and pecuniary condition of his future son-in-law. He may, indeed, contrary to established usage, interrogate the young man as to his freedom from venereal disease, but the latter would be hardly frank enough to reveal the existence of such a disease if he had it. To meet this difficulty it has been proposed that the candidate for marriage should be provided with a certificate from a physician which should be equivalent to a medical sanction or prohibition of his marriage. Many French authorities speak highly of this solution of the problem.

Jullien is quite enthusiastic over such a procedure, "as the father of a family would find himself relieved from any painful uncertainty if at the beginning of an engagement he received a paper couched in terms like this:

"'I declare Mr. X. to be free from all morbid conditions of the genital organs. After a careful local examination I have not discovered any trace of disease of contagious or transmissible malady.

(Signed) PRASCATOR.'"

"In the advent of the patient being ill or still uncured of his disease, the terms might be so expressed as to make it equivalent to a certificate of disease, in which case the interested party would not likely use it."

Without reference to the hostility of public sentiment in this country against the adoption of such a restrictive measure there are certain objections of a practical nature which suggest themselves.

While it may be possible to determine the fitness of a gonorrheic for marriage by a bacteriological examination of the urethral secretions, it is not always possible to come to an equally definite conclusion as to the aptitude of a syphilitic to transmit his malady. In many cases it is not possible to determine whether a man is syphilitic or not in the absence of existing accidents and the history of antecedent symptoms, all information relating to which the patient would doubtless withhold. Among other abuses, offices would be opened for the sale of certificates destined only to dupe those they are ostensibly designed to protect.

Another phase of quarantine protection suggested is the requirement by the State, as a preliminary condition to the issuing of a marriage license, of a certificate from an official board of examiners showing that the contracting parties are free from contagious or transmissible venereal disorder. Some of our western sociologists with a fatalistic belief in the efficacy of legislative enactments to correct social evils have sought to place such laws upon the statute books of Michigan and a number of other States. The remedy would be vain and futile of the anticipated results, its thorough enforcement would be impossible, its obvious effect would be to promote celibacy, as many self-respecting persons would rather forego marriage than to be subjected to what they would regard as a humiliating condition, while others would evade the law by simply crossing the borders of another State where such a law was not in force.

After Marriage.

While it is the duty of the physician to employ any justifiable means to prevent the premature marriage of a venereal patient, yet it often happens that he is not consulted during the prematrimonial period, and his advice is only asked after the marriage has been consummated and the disease introduced into the household.

There are a variety of situations which present themselves in practice. The patient may have married believing himself cured; he may have received an infection from an exposure just before marriage, the results of which are not manifest until after marriage; he may have become contaminated from an exposure *post nuptias*. His wife may not yet have been exposed to contamination or she may already have been infected. It is evident that the physician's duty will be rendered more difficult and delicate in view of these more complicated situations.

In the first place his manifest duty is to limit the disease if possible to the one who has no right to complain of it and prevent its propagation to others, to establish a sanitary cordon which shall protect the woman and her offspring. He will find this task extremely difficult under conditions created by the exigencies of a life in common and which are so favorable to contagion. If the man has syphilis in an active contagious stage, it will be necessary not only to interdict all sexual intercourse but to urge that every precaution be taken against exposure to the multiple and varied modes of extragenital infection, such as might occur from kissing, or through accidental and unconscious contacts from sleeping in the same bed, using the same drinking or eating utensils, etc. If the wife has already become infected, it is of the utmost importance that she should have thorough and efficient treatment, not only to protect her from the individual risks of the disease, but also to secure its preventive influence upon the hereditary transmission of the disease.

The important question comes up in this connection whether the wife should be informed of the name or nature of her disease.

The fixed rule of professional conduct in these cases, from which there can be no deviation, is that no information or hint even of the nature of the disease should come from the physician. It matters not what may be the feelings of indignation or disgust he may entertain for the *man*, he must zealously guard the secret of the *patient;* the harm has been done and cannot be undone, the main indication is to limit its ill-effects.

It is a question whether it is not better in the interest of the wife as well as of the husband that she should not know or even suspect the nature of her disease, if it can be possibly concealed from her, and thus spare her the mental anguish, the sense of injury, shame and humiliation which would come from the revelation.

From this point of view Langlebert advises that "the husband should have in the physician a faithful and intelligent ally who conspire together to conceal the nature of the disease."

The general trend of advice given by most writers is that the patient should "never own up." "Confess nothing, keep up appearances and get well." Such is the formula for his guidance. Now, it is conceded that the physician in his efforts to save a compromising situation, and preserve the harmony and peace of a household, is justified in employing all the resources of his tact, all the skill of his diplomacy, and, if need be, resort to evasion and subterfuge in protecting the patient from the consequences which might follow the wife's knowledge of the harm he has done her.

While this policy of concealment coincides with the natural indisposition of the husband to avow his fault, its wisdom is open to question. The fact must not be lost sight of that there are other interests besides that of the husband to be considered and most important is that of the wife in reference to treatment. Unfortunately in keeping up attempts at deception, the infected wife may not only be made to incur all the individual risks of the disease communicated by her husband, but she is often denied the benefits of prompt and efficient treatment. Incredible as it may appear, many husbands who infect their wives employ every possible means to prevent them consulting a physician from the fear of exposure of their infidelity which must come from the wife's knowledge of the nature of her disease. The physician cannot too strongly arraign the selfishness and lack of humanity on the part of husbands in this regard, and should insist upon the wife's receiving proper treatment as the condition of his continuing his professional relation with the husband.

Now, in practice it will be found extremely difficult, in many cases impossible, to treat a woman during the prolonged period necessary to a cure and dissimulate the nature of her trouble. Notwithstanding the most painstaking precautions on the part of the physician in concealing the character of the remedies employed, the exercise of his diplomacy in parrying her embarrassing questions as to "why she should have the same symptoms as her husband," etc., and in per-

suading her of the necessity of continuing treatment in the absence of all manifestations, sooner or later she is apt to divine the nature of the disease for which she is treated, so that the little comedy of deception and falsehood most often proves a dismal failure.

Thibierge strongly advises that in all cases when the husband has syphilis he should make an avowal of his fault, whether the wife has been infected or not. This simplifies the whole situation. If she has not been infected, there may be an intelligent coöperation between both partners in taking proper precautions against it, and if she has already been contaminated, both can properly be treated, while pregnancy, which would be followed by such deplorable consequences, may be avoided.

To take off the keen edge of the situation, he suggests that the husband might forge the history of an extragenital infection, the probability of which may be attested by the physician, rather than confess that the disease was contracted from a former mistress or by a chance liaison.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

312th Regular Meeting, March 24, 1903.

HENRY H. WHITEHOUSE, M.D., Chairman pro tem.

A Case for Diagnosis. Presented by Dr. George H. Fox.

The patient was a woman of forty-five, a widow, whose general health was good. There was slight indigestion and constipation. The menopause came on one year ago. She presented an eruption upon the face, which appeared about one year ago. He was of the opinion that it was a disseminated tuberculosis because it was precisely similar in appearance to a case of that nature which he had seen some years ago. The eruption was now scattered all over the face but was thickest over the middle portion. The upper eyelids and the ears were involved. Some lesions were found upon the arms, upper part of the chest and on the foot. She had a rosacea of the nose. The particular eruption to which attention was called consisted of papules, some of which were of the color of the skin, but most of which were reddened. There were also many small lesions that looked like vesicles, but which, on being pricked, were found to contain no fluid but were very vascular. There were also a few small pustules, and pits showing sites of previous lesions. Just below and to the outer side of the outer angle of the right eye was a round,

elevated, granular looking lesion, 9 mm. in diameter, which, on being pricked, gave exit to a large amount of thick pus. There was a similar lesion on the bridge of the nose. The lesions on the trunk and extremities were similar to the small ones on the face. The patient was seen but a few days ago, and thus far no microscopical examination of the lesions had been made.

Dr. P. A. Morrow said that the case had a most surprising resemblance to certain unusual forms of acne which he had seen and treated. His impression was that it was an aggravated form of acne.

Dr. E. B. Bronson said that he would not express an opinion upon the case until microscopical examination. He did not see how acne The case did not conform to the description of adenoma sebaceum, but growth which was not at all a part of the acne process.

Dr. H. G. Klotz also thought the case presented the appearance of some aggravated forms of acne. If it were tuberculosis he would expect it to be more deeply seated.

Dr. A. R. Robinson said he would not be willing to make the diagnosis without microscopical examination, though he was inclined to think the case to be one of tuberculosis.

Dr. Morrow asked if there were negative evidence would Dr. Robinson exclude that disease.

Dr. Robinson said that if he cut one or two pieces out and found no tuberculous structure, and also if he found no tubercule bacilli after proper investigation he would exclude tuberculosis.

Dr. Fordyce said that without further investigation he would make a clinical diagnosis of disseminated tuberculosis of the face. Some of the lesions about the eyelid were very similar to lupous lesions. It was true that in rosacea one saw similar lesions, but not the same grouping or distribution.

Dr. H. H. Whitehouse said that the case impressed him as a sebaceous disease, for there were distinct comedones in most of the lesions, and the distribution was upon the chest and face, where sebaceous glands were most abundant. There was a marked rosacea and some acne lesions. would account for the lesions present, as there appeared to be a new he was inclined to think it was of this nature rather than an acne.

Dr. Fox said he would have a nodule excised and examined microscopically. The case appeared to him to be localized follicular tuberculosis, a new growth and not merely an inflammatory condition of the follicles. Clinically it was like three other cases of which he had two photographs. The distribution of the eruption upon the face was almost identical in these cases. The first case seen by him was thought to be possibly a lupus because of the gelatinous appearance of the nodules, and then it had occurred to him that the case resembled the description given of colloid milium. One case was reported under this heading

with photograph. In that one Dr. Elliott found tubercle bacilli present. In these former cases the treatment had consisted principally in digging out the firm mass in the follicle, and in each case there was a free and persistent hemorrhage. There was no marked pustular formation.

A Case of Alopecia Totalis. Presented by Dr. S. Sherwell.

The patient was a woman of twenty-nine, married but without children. Two cousins, one male and one female, had had small spots of alopecia areata, but aside from this the family history was not of special interest. She had herself suffered from nervous headache and catarrhal trouble. She came to his office on February 14 with total alopecia. The first appearance of this alopecia was when she was sixteen years old, and consisted of a spot about the size of a dollar on the side of the head. This quickly disappeared, the hair coming in white thereafter, and later assuming a natural color. There were slight recurrences from time to time over nearly all of the head. The last attack commenced along the occipital ridge in July, 1901, and continued gradually to spread for six months. Since that time the whole body had been slowly invaded. Menstruation, digestion and the function of the bowel were normal. She had previously been treated by electricity and massage, by a well known advertising dermatologist, without effect.

Dr. J. A. Fordyce asked if any one present had ever seen total alopecia in secondary syphilis. He had in his possession a photograph of a case of this kind occurring in a syphilitic. Of course, this was very unusual, and might have been a mere coincidence.

Dr. J. C. Johnston said that as the condition had persisted as long as a year there was not much chance of improving it. If of shorter duration some improvement might be effected by the use of a three or five per cent. solution of pyrogallic acid.

Dr. Robinson said that after the lapse of a year the follicles became so atrophied that the hair would not grow again. In the earlier stages he would make use of chrysarobin.

Dr. Klotz thought the prognosis in these cases was not always absolutely bad. Some years ago he had seen a woman of about the same age as this patient. He was not disposed to do much for the case, but some years later she returned with a good growth of hair. At one time he had observed a syphilitic with an extensive alopecia which existed before and through the active period of the syphilis. A few years afterward the alopecia disappeared as a result, so the patient said, of the use of a homely popular remedy.

Dr. E. L. Keyes recalled a similar case occurring in a man. For about two years a severe treatment of the case was carried out, even to repeated blistering, but without the least improvement. Two or three years afterward the man returned with a new growth of hair, which was

thinner than the original and somewhat more curly. The growth had recurred after stopping all treatment, and probably about four years after the occurrence of the alopecia.

Dr. Bronson thought it a mistake to make a very unfavorable prognosis in these cases. At one time a man had come to him absolutely bald and devoid of hair all over the body. As the alopecia had lasted for several years it was thought to be of no use to try to restore the hair. Subsequently the man came to him to indorse a nostrum which he had devised for making the hair grow, and which he said had caused the disappearance of his own baldness. His hair was growing unquestionably, and he had a crop about like that of a new-born babe. Dr. Bronson said he would like to know whether any present had observed any apparent connection between alopecia and carious teeth as maintained by Jacquet. Recently he had had a case which resisted treatment, until the teeth that were much diseased had been attended to, after which there had been some considerable improvement in the alopecia. He was uncertain, however, whether this was merely an accidental coincidence. The local treatment of the scalp had been continued.

Dr. P. A. Morrow thought that the prognosis was always bad in total alopecia, although not entirely hopeless. Mention had been made of the fact that after a long period there might be considerable atrophy of the hair follicles. This, he thought, was doubtful. He had had a case of complete alopecia occurring in a diabetic patient who was passing thirty or forty grains of sugar to the ounce of urine. With regard to the treatment, the best local application he had found was acetic acid and chloroform or ether. It was very penetrating and used in conjunction with petroleum preparations had more efficiency in stimulating hair growth than almost anything else. In one case of complete alopecia in which apparently every hair of the body had disappeared quite an appreciable growth of hair took place supposedly as a result of such applications, although possibly this might have been spontaneous.

Dr. A. D. Mewborn thought the prognosis should not be made too gloomy. Cases had been reported in which total alopecia followed the use of acetate of thallium. This drug had been used for the night sweats of phthisis. It had been tried at one time with the idea of curing ringworm by causing loss of hair in the patches, but the remedy was found to be very dangerous. He recalled a case recently seen at the University Bellevue Clinic of typical alopecia areata with ringworm. The latter had existed for two years. Last December the boy had had an acute attack of tonsillitis and otitis media purulenta, and at the same time the hair began to fall out. Not only the ringworm patches but the other portions became denuded of hair. There were stubs of broken hair around the margins of bald patches, which on microscopical examination were found to be affected with the microsporon Audonini.

Dr. H. G. Piffard said that he had tried the thallium salt locally, thinking it might prove useful in the removal of hair, but the result was entirely negative.

Dr. Whitehouse agreed with what had been said regarding the prognosis. It was proper to persist in the use of very stimulating applications even in apparently hopeless cases. The internal administration of nerve tonics or of remedies intended to reach the neurotic element seemed to him entirely futile.

Dr. Sherwell said that he had some hope of recovery of his patient. Electricity and various other applications had been made use of before coming to him. He believed that the alopecia was the result of some profound impression on the trophic nerves, though absolutely in the dark as to its nature, and that possibly in time a new growth of hair would take place in this woman who was otherwise so well nourished. He would suggest a long sea voyage in a case of this kind, he having seen other skin neuroses improve so much from this alone.

Lupus of Nose Treated by the X-Ray.

Dr. Fox again presented this case to show the results of treatment. There had been 48 ray treatments of the right side of the nose and the case no longer showed a disposition to improve. The left side of nose, treated by the dental burr dipped in carbolic acid was nearly well. Dr Fox thought the result in this case demonstrated that the old method of treatment was more efficient and speedy in many cases of lupus than was the X-ray.

(*Continued in July Number.*)

BOSTON DERMATOLOGICAL CLUB.

The regular monthly meeting, February 24, 1903,
Dr. G. F. Harding in the chair.

As several of the patients who were expected failed to appear, the evening was also devoted to presenting the histories of the more interesting absent ones.

Dr. J. T. Bowen reported two cases of **bullous dermatitis following vaccination**, which he wished to add to his earlier list.[1]

The first example was that of a girl four and one half years of age, born in America, of American parents. She was well nourished and had had no previous illness. She had been vaccinated six weeks before she was first seen by a most reputable practitioner, who had vaccinated at the same time another child in the same family. Both vaccinations were successful and no unusual effects were seen until one month after the

[1] *Jour. Cut, and Gen. Urin. Dis.*, Sept., 1901.

inoculation, when the child in question presented a bullous eruption, beginning first upon the face, extending thereafter over the body.

When seen, the face was the seat of several bullæ, without redness or infiltration of the base, varying in diameter from ½ to 2 cm. About the nose and mouth there were some crusts which had been preceded by bullæ. The arms and legs were most markedly affected, especially about the flexures of the elbow and the knee, so that walking was impossible, and the child was confined to bed. The eruption was quite profuse upon the hands. The trunk was almost wholly free of eruption. About the genitals and thighs, however, the lesions were very numerous, and here they were of very large size, some of them three or four cm. in diameter. The eruption was very profuse about the knees, but very slight upon the ankles.

The eruption was essentially a bullous one, with occasional evidences of pus or sero-purulent fluid, but without sign of other lesions. Naturally some of the bullæ had collapsed, leaving raw and exposed surfaces. There was no rise of temperature, no constitutional symptoms greater than could be accounted for by the discomfort produced by the involvement of a large surface of skin. The bullæ had been constantly recurring in crops during the last two weeks. There was no special tendency toward grouping.

Comparing this case with those previously reported, the time elapsing after vaccination before the appearance of the eruption coincided with that of two of the previous series. It accorded also in the fact that the trunk was slightly or not at all affected. There was not so marked a predilection for the mouth, nose, ears and ankles, but the hands and wrists, as in the former series, were prominently affected.

Two months after she was seen, it was learned that the child had made a slow but steady improvement. At that time, there were present only a few crusts about one ankle and a few small bullæ scattered about. She was able to eat well and was up and about. Contrary to what has been the rule in these cases, there were at one time a few lesions on the tongue and the roof of the mouth, which seemed to cause some difficulty in swallowing, although no lesions were found in the throat.

The second instance was that of a boy of seven, also an American and born of American parents. In his case there was an unusual, although not extraordinary, local reaction and the arm was very painful and slow in healing. Two weeks after inoculation bullæ began to appear on other parts of the body. When first seen, two months after vaccination, the eruption was most marked on the predilection-points as in the first series of cases, viz., about the nose and mouth, backs of the hands and wrists and the ankles. Here, too, the eruption was purely bullous, made up of large and small lesions without erythematous border or infiltration. There were numerous very large lesions, especially about the but-

tocks, which caused great pain and discomfort in the recumbent position. There was no pruritus.

This patient was admitted to the Children's Hospital where he remained for three weeks. Physical examination revealed nothing of importance with the exception of the cutaneous disturbance. Examination of the blood gave fifteen per cent. of eosinophiles.

The lesions continued to appear in about the same localities, but soon took on a much smaller type so that none of the large bullæ were to be seen. After being in the hospital a short time the tendency to grouping about the ears, wrists and ankles was lost and the picture was presented of small bullæ scattered sparsely and irregularly over the body. In this condition the patient left the hospital, about ten weeks after the beginning of the affection, and has not been seen since.

Dr. Bowen also related the history of a very pronounced example of **arsenical keratosis** of the hands and feet in a man of twenty-seven, a native of Massachusetts. The patient had been affected with psoriasis for the last nine years and had never been wholly free from the lesions during this time. The man had taken arsenic in the form of Fowler's solution during most of the time for three years in doses of from five to ten drops three times a day. When seen he presented an extensive annular and serpiginous eruption of psoriasis of the body and limbs. The scalp was affected to a marked degree and the eruption extended down upon the forehead.

The palms and soles were the seat of a diffuse tylosis, in which were seen the round, clavus-like masses so characteristic of this form, and on the backs of the hands and feet there were also numerous keratoses, some of them presenting the appearance of ordinary keratosis senilis, others of the type of those seen on the palmar and plantar surfaces. The patient thinks that the keratosis began as early as six months after he began to take arsenic.

Dr. G. F. Harding showed a man who represented a rather **unusual example of syphilis.** The patient, a married man of forty-one years, had, in 1880, a sore on the penis which healed under iodoform ointment leaving a scar. He also took a liquid medicine which he thinks was iodide of potash. In 1886 the man had a bubo in the left groin which was opened and healed quickly. He also received iodide of potash for three months. There was no history of taking mercury in any form.

In 1890 the patient was married and has never exposed himself to any venereal infection since that date. The wife has had seven pregnancies from which two children are living.

Pregnancies.

1. Miscarriage—three to four months.
2. Seven months' child which lived a few hours.
3. Child lived twenty-four hours.
4. Baby born dead.

5. In 1895. Boy now seven years old and has always been healthy and has never had any eruption on his skin.

6. Girl, who died of whooping cough (?) when three months old. At the age of two months she had a general eruption upon her body.

7. A girl born in 1901 and now living.

The two living children were seen by Dr. Harding and presented no sign of syphilitic taint, the baby being particularly well nourished. The wife, thirty-three years old, was also examined and showed no evidences of disease and said that she had nursed both children.

The wife came to the Boston City Hospital April 7th, 1898, and the following notes were made of her case. "Rash all over body, macular. No sore throat, no alopecia, no itching. Glands in neck and in epitrochlear region enlarged. Various nervous symptoms, headaches. Duration of symptoms, two months. Was given iodide of potash gr. v. t. i. d. and pil. hydrarg. proto-iodid. gr. 1/8 t. i. d. April 14th, general condition improved, eruption scaling. April 23d, roseola gone. Pain in back, but feels better. August 15th, 1900, headache evenings and nights. Iodide of potash, gr. v."

It will thus be seen that this woman showed unmistakable signs of syphilis after giving birth to at least four syphilitic children.

To return to the husband. During the last three years he has had recurrent "pimples" upon the penis and recurrent headaches, but has been otherwise well.

Three or four months before presenting himself to Dr. Harding the man says that he had an eruption upon the skin. At the present time there are on the tip of the nose and right side of the upper lip closely grouped, vegetating tubercles, tending on the nose to ulceration. On the right arm, over the deltoid insertion, there is a circinate patch of tubercles two inches in diameter. A few of the tubercles show papillary proliferation. There is also a similar patch on the abdomen near the umbilicus. On the dorsal surface of the penis and on the scrotum there are scattered tubercular lesions. On the scalp a few tuberculo-squamous lesions. Epitrochlear and inguinal glands are enlarged. There is nothing abnormal in the mouth or throat.

Dr. C. J. White reported a case of **keratosis palmaris et plantaris hereditaria** in a Finn, æt. 35. The man has been a quarryman for the last sixteen years and previously worked upon a farm. He says that he has had the disease upon his hands and soles all his life. The pathological condition, however, disappears each summer and reappears in the autumn. The patient has three brothers, two of whom have the same tylotic conditions on their feet and hands, while their mother and her brother were afflicted in the same way. Farther back in the family history the man cannot go, but he himself has five children, one of whom, a little girl, whom Dr. White saw, has tiny, raised, black lines on the palm of her hand.

The patient's hands and feet are covered with thick, yellow, horny masses separated by deep, dry, irregular cracks. There is apparently no distress or inconvenience resulting from this rather rare condition and the man refused treatment.

Dr. C. J. White also reported his histological findings in the case of **lichen planus annularis**, which he showed at the January meeting of the society (vide Journal Cutaneous Diseases, April, 1903).

The specimen was excised from one of the lichen rings, the excised portion extending across the periphery of the circle and including the comparatively healthy tissue beyond the ring. The sections were made in paraffin and stained in several ways.

Beyond the pathological portion proper the epidermis presents many signs of disease. There is much dark pigment adjoining the corium and the palisade layer is not at all well differentiated. The nuclei of the rete are larger in proportion to their surrounding protoplasm and many have halos about them. The rete varies much in thickness, at times of normal depths, at others contracting to a half dozen rows of cells. The granular layer is very attenuated presenting thin, drawn-out cells which occur only at intervals and do not form a continuous stratum. The horny layer forms a solid mass and does not present the light, wavy differentiations of healthy cells. There are, however, no other signs of parakeratosis.

The corium contains but few structures. The papillary layer is present and shows a moderate extravasation of lymphocytes. Below, œdema and its sequelæ are the only striking features. The collagenous bundles are thick, stain poorly, are distinctly separated and exhibit but few nuclei. A rare mast-cell is revealed by the polychrome-blue-glycerine-ether stain.

The sections of the lichen ring itself exhibit a deeply affected epidermis. In places there is a palisade layer, but this is the exception, and for the most part it is difficult to appreciate where corium ends and rete begins. The depth of the rete varies greatly. Here and there, it is of average size, while again it shrinks to three or four horizontal layers of non-nucleated, almost homogeneous, poorly staining cells. Thus the Malpighian layer shows varying degrees and expressions of disease, but, as a whole, its cells are characterized by œdema, absence of nuclei, feeble staining power and a very early tendency toward the horizontal position. Occasionally, lymphocytes find their way between the cells. Although there are several places in this layer where the œdema is very marked and the cellular structures thinned and separated, nevertheless one can find no structure that could be called a vesicle.

The granular layer as a whole is thicker and the cells more typical than in the more normal surrounding tissue above alluded to. Where the epidermis is most gravely affected this layer disappears completely.

The stratum corneum varies from a thin, homogeneously-staining outer membrane to a well-marked hyperplasia. As a rule, however, the layer is distinctly thickened and composed of normal, waving, non-nucleated cells.

When we come to examine the structures below this abnormal epidermis we are struck by the conditions present. Extending for a long distance below the epidermis we find a thick wall of cellular invasion which dovetails into the rete above and forms a sharp, regular line of junction with the corium below. This cellular mass is about twice the thickness of the superjacent rete, and, for the most part, coincides with the varying depths of its epidermal covering.

The papillæ have completely disappeared and their vessels have gone likewise. Throughout the cellular wall many good-sized vessels appear, showing some dilatation, but no endothelial changes. The capillaries and the mass of surrounding lymphocytes constitute about the whole of the skin at this level, for the fibrous tissue is very thin and delicate. Throughout this layer there are signs of œdema and in places almost a suggestion of vesicular formation, but even here the term vesicle is scarcely justifiable. The infiltrating cells are almost wholly lymphocytes. An occasional poorly formed mast-cell is present, but plasma-cells and polynuclear and eosinophilic leucocytes are completely absent.

Below this level the corium assumes its quasi-normal condition and resembles the corium below the epidermis adjacent to the disease proper. Structures are sparsely scattered, infiltrating cells are rarely seen, but the connective tissue bundles stain faintly and are separated by œdema.

The elastic tissue appears in normal amount and its structure and staining reactions are well preserved throughout the corium, except in the lymphatic mass, where all signs of elastin have absolutely disappeared.

Dr. C. J. White lastly presented a young man, aged twenty-one, the subject of disseminated lupus erythematosus. The patient was born in New Brunswick and affirmed that to the best of his knowledge there had been no cases of pulmonary tuberculosis in his family and that he himself had always been well. He looks strong, and devotes his time to working in wood. The disease began upon his face two years ago as a small area on his left cheek. This lesion spread and others have appeared from time to time and have coalesced, forming a large typical plaque, extending from the original site over the bridge of the nose to the right cheek and down toward the beard. This lesion shows in its center horny collections about the follicles. Outside of these, bluish atrophied areas and outside of all raised reddened zones. On the left side a circular lesion exists over the eyebrows. This began about ten months ago and has attained the diameter of one inch. The outline is wavy and the peripheral part is pink, congested, smooth and feels hot to the touch while its center is somewhat sunken, dry and scaly, but shows no evidence

whatever of atrophy or scar formation. On the right cheek near the beard a similar but smaller lesion appears, which began about six months ago. Under the right eye one notes three or four small circular lesions which appeared three weeks previously. They are circular, highly vascular, raised, flat-topped papules, closely resembling those of erythema multiforme. The largest one, ¼ inch in diameter, is beginning to show an elevated periphery.

Atrophic rhinitis was looked for, but only a dry scaling condition exists in the nostrils. CHARLES J. WHITE, Secretary.

DESCRIPTION OF FIGURES 1 AND 2.—Dr. C. J. White's Case of Lichen Planus Annularis.

FIG. 1. Illustrates with the low power a portion of the lichen ring, showing a thickened portion of the epidermis, the broad belt of infiltrating lymphocytes in the upper layers of the corium and the rather structureless condition of the deeper layers. The spaces in the corium are artificial.

FIG. 2. Illustrates very clearly the more minute structure of the section at another point. Note the thickened stratum corneum, the poorly staining, frequently a-nuclear horizontal cells of the rete, the breaking down and œdema of the lower layers of the malpighian layer, the character of the invading lymphocytes and the rarified condition of the corium.

The photographs are by Mr. L. S. Brown of the Massachusetts General Hospital, Boston.

ABSTRACTS.

Adiposis Dolorosa and Painful Symmetrical Lipomata. P. THIM. (*Monatshft. f. prkt. Dermat.*, 1903—XXXVI.—281.)

Adiposis dolorosa is the name given to this peculiar disease by Dercum in 1892, although the first description of it was by Sydenham under the name of white œdema. P. Thim describes it as a massive infiltration of the skin and subcutaneous tissues which feels as if firm lard had been let into the tissues. At times these infiltrations are extraordinarily painful so that the pain is taken for that of rheumatism. In small infiltrations there is only slight pain on pressure, but in large infiltrations the pain is spontaneous. The pain is not constant. The disease affects usually the limbs, specially the lower extremities, and with symmetry. The trunk may also be affected. General obesity may be pronounced. The skin over the infiltrations is often blue. The disease affects most frequently older women who are passing through the climacteric, but it may occur in younger women and in men.

Besides this form of painful fatty tumors we see also painful lipomata with pain of about the same character, and at times showing blueness of the skin over them. They are usually multiple, especially on the limbs, and symmetrical. They may be present in thousands. Like adiposis dolorosa they may occur in connection with the menopause, and be accompanied by hysteria, neuralgia, headache, anæmia and diseases of the thyroid. Their etiology is not determined. Some believe them to be in some way related to the nervous system. Thim believes that the pain of both adiposis dolorosa and painful lipoma is due to heightened blood pressure, probably depending upon disturbed innervation and the

PLATE XXXV.—To Illustrate Boston Dermatological Club Report.



Fig. 1.

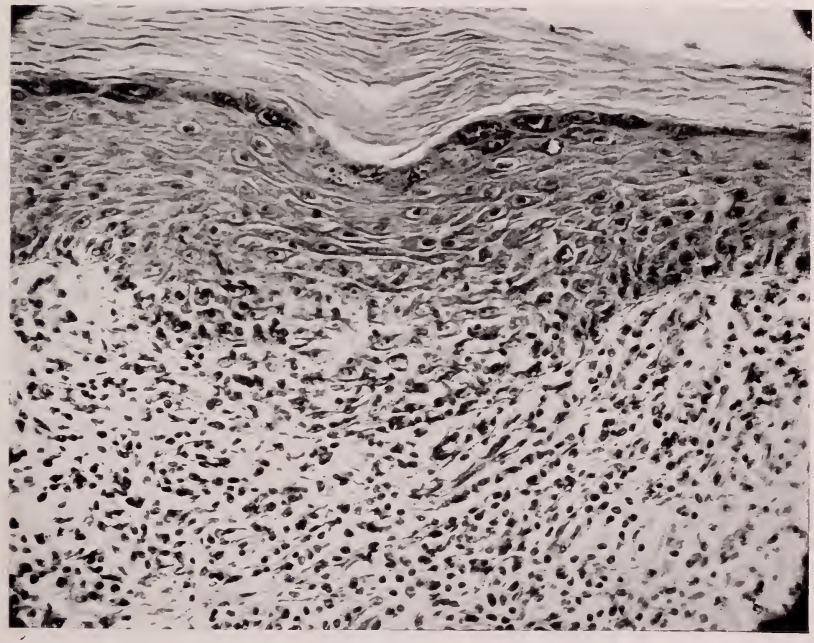


Fig. 2.

consequent alteration of pressure upon the nerves of the affected part. The blue color over the tumors is taken to attest the correctness of his theory.

Thim believes that both kinds of painful fatty tumors can not be sharply separated, but are closely related to each other.—Jackson.

Is Lupus Erythematosus a Tuberculide? (*Munch. Med. Woch.*, 1903—L—378.)

Among the older French dermatologists, before the times of Koch, the disease was regarded as a scrofulide. During the past few years many well-known men have adopted the idea that, in many cases at least, it is a tuberculide due to the toxin produced by a deposit of tubercle bacilli in some distant organ and brought to the skin. This view our author does not adopt. He reviews the findings in twenty autopsies of patients who had lupus erythematosus at time of death, and shows that in only nine of these were any sign of tuberculous disease discoverable after the most thorough search. This percentage of 45 is not regarded by our author as of any moment on account of the great frequency with which signs of tuberculosis are found in autopsies.—Jackson.

Acute Malignant Pemphigus. W. J. Caie. (*Brit. Med. Jour.*, 1903—1—308.)

The author reports another case of this rare disease which proved fatal in twelve days. At first the eruption of bullæ without areola was confined to the arms and there was no disturbance of the health. Within a week the eruption had become general and the patient was very ill with a temperature of 101 degrees and a pulse of 120. On the ninth and tenth days the patient had hæmatemesis and epistaxis, and a general erythematous eruption. The highest temperature reached was 103.6 degrees on the eighth day. He then began to go into collapse with subnormal temperatures toward the end. The man worked among cattle and shortly before the development of the disease he pricked his hand while washing sheep.—Jackson.

Baths. Uriage-Station D'Enfants. A. Doyon. (*La Presse Medicale*, Mar. 28, 1903.)

This beautifully situated watering-place, combining as it does the advantages of sea-bathing with the altitude of four hundred meters, is considered by Doyon as especially beneficial in the treatment of children affected with skin diseases. The springs, containing 6 per 1,000 of sodium chloride, as well as 64 per 1,000 of free hydrogen sulphide, give most favorable results in children affected with persistent impetigo, eczema, prurigo, urticaria, impetiginous coryza, blepharitis, keratitis, etc. The non-irritating character of a water so strongly sulphurous is attributed by Doyon to the high percentage of sodium chloride rendering it nearly isotonic with blood serum. This explains its non-irritating effect upon the epidermis. Even acute moist eczemas of children become rapidly better under these baths, and the author has never seen in chronic eczemas the irritative reaction often observed in other sulphurous waters. As an auxiliary to specific treatment of hereditary syphilis and especially in children affected with what the French authors call "*lymphatisme*," waters of Uriage give most brilliant results. It is in seborrhoic eczema, that is to say, in seborrhoic lesions, which have become eczematized, that Uriage seems to hold the "record" for cures among watering places.—Mewborn.

A New Nail Parasite (Ein neuer Nagelparasit.) Dr. Dreuw. (*Monatshft. f. prakt. Dermat.*, 1903—XXXVI.—page 341.)

The possible saprophytic existence of the fungi which attack human hair and skin, has been frequently suggested by eminent mycologists. It has been shown that the trichophyton may be cultivated upon wood, grain, straw and other media

of low nutritive value. Dr. Dreuw has demonstrated a new fungus which was the cause of an onychomycosis. This fungus led a saprophytic existence upon the decaying straw used as packing around bottles. The patient, aged 35 years, had been employed for the preceding year in a *"Liqueurgeschäft."* He gave no history of previous skin disease nor of syphilis. In November, 1901, he applied for treatment at the City Hospital of Elberfeld for a disease of the nails. All the nails of the left hand and the thumb-nail of the right hand were affected with a painless, non-inflammatory, deforming disease of the nail substance. The nails were raised from the distal extremity by a wedge-shaped accumulation of greyish-yellow masses of horny tissue. The nails became excessively brittle, and would split on making attempts at trimming them. The patient had accumulated a pill-box full of these horny masses and split off particles of nail substance. The anamnesis revealed the peculiar source of infection. In February, 1901, it had been his duty to remove the packing straw from bottles which were to be filled with a solution of sugar. He stated that one case of bottles with the straw packing had been allowed to stand out in the rain and that the decayed straw was very adherent to the flasks. In cleaning them, it had been his habit to hold the flask by the neck with the right hand and to scratch off the adherent straw with the nails of the left hand.

He also used the right thumb-nail in the same manner, and it was precisely the nails so employed which were affected. Four nails of the left foot and three of the right were also affected. This infection of the toe-nails was accounted for by the patient's habit of breaking off the toe-nails with his finger-nails. Cultures made on gelatine and peptone agar in Petri-dishes gave, at room temperature, a snow-white, downy colony. On gelatine the growth showed radial lines which did not cross, rapid in growth, at first of a gray color, and about the eighth or tenth day, developed a snow-white down. Liquefaction of the gelatine took place with development of NH_3. Milk was coagulated on the eighth to tenth day. Cultures seemed to be equally adapted to an acid or alkaline media, and were not killed at a temperature of zero centigrade. Although growing best at room temperature, it could be acclimated to grow at blood temperature. Spore formation was best observed in the moist chamber of Lindner. Spores were ectothrix, wedge-shaped, about 1.5μ to 2.6μ in diameter. No fusiform chlamydospores were found. In brief, the case was one of a fungus affection of nails as shown; by the clinical course (extremely obstinate), by the sections and microscopical examination revealing the presence of a mycelium, and by the cultural growths attained from all the affected nails. Against the diagnosis of favus was the absence of favus or trichophytosis on any other part of the body or in any other member of his family, and the failure to obtain a culture resembling favus. Against the identity of this fungus with that of trichophyton megalosporon the author claimed the peculiarity that it grew better at a low temperature than at blood temperature, the wedge-shaped spores, and the characteristic growth in Ehrlenmeyer flasks on maltose-agar.

While the author does not attempt a botanic classification of the fungus, his investigation was very complete, with the exception of a lack of experiments on animals. As to treatment, the author used local applications of salicylic acid and pyrogallic acid, aa, 3. alcohol 10.; applied night and morning. After a few days, an inflammation of the nail-bed developed and a serous exudate raised the nail so that it could be easily removed. The pain was relieved by a 5 per cent. solution of cocaine. The heating was completed by an indifferent salve. In spite of this energetic treatment in October, 1902, nearly a year after first observation, there was found a trace of infection under the nail of the great toe, from which a pure culture of the fungus was obtained. This resistence to treatment is not surprising when we consider that Lespinasses reported a case of onychomycosis trichophytina, which, untreated, had lasted for thirty years.—Mewborn.

Lupus and the Finsen Ray. M. L. Heidingsfeld. (*Cincinnati Lancet-Clinic,* 1903—LXXXIX.—page 421.)

Heidingsfeld reports three interesting cases of lupus vulgaris, which had been previously treated by the X-ray with indifferent or negative result, but which improved rapidly under the London Hospital or Sequira Lamp.

The first case, a man aged 26 years, had a lupus vulgaris of eighteen years' duration, which had received a limited improvement under X-ray treatment. The condition then became stationary and ten subsequent X-ray exposures failed to produce any change. The Finsen ray was then used, followed by a marked improvement. All erythema fading and nodules rapidly disappearing.

The second case, which made rapid progress at first under X-ray treatment, became stationary, and when it was decided to try the Finsen ray there were still present eight areas on the face of scales, crusts and deep-seated nodules. After exposures amounting in all to thirty minutes the change at the end of two weeks seemed incredible.

The third case of lupus vulgaris, of five years duration, in a female aged 37, no improvement whatever had attended X-rays in the hands of two operators, even to the extent of inducing an alopecia of the surrounding lanugo hairs and dermatitis. After eight exposures to the Finsen rays the nodules have apparently disappeared. Heidingsfeld has also used the Finsen ray for telangiectasic nævi.—Mewborn.

Remarks on the "Light Treatment" of Lupus and Rodent Ulcer. A. J. Harrison and W. K. Wills. (*Bristol Medico-Chirurgical Journal,* 1903, XXI., page 23.)

The authors give results obtained in the Bristol General Hospital, '01 to '02. At first two Lortet-Genoud lamps made by Marshall and Woods, of London, later two lamps made by Miller were used. Current used was an interrupted one —five to ten ampères, about twelve volts, and the time of sitting at the lamps—five to twenty minutes. Several patients had two to four sittings on each day of their attendance especially if disease was extensive.

During the above period 42 cases of lupus vulgaris, 3 of lupus erythematosus, 12 of rodent ulcer, 1 of the late stage of actinomycosis, 3 of acne pustulata, 1 of adenoma sebaceum, 2 of Paget's disease, 1 of advanced carcinoma of right breast and axilla. The results in lupus vulgaris were as follows:

1. Ages, 4½ to 73. Duration of disease, 1 to 45 years. Sex, 16 males, 26 females.

Improved and continued under treatment	26.
Relieved—to be kept under observation	5.
Relieved—in one or more parts, whereas other parts have to be treated	4.
Not improved	1.
Unsatisfactory, through non-attendance	2.
Cases under treatment for too short a time to judge	4.

Two out of three lupus erythematosus improved, but made more rapid progress under X-ray treatment.

The twelve cases of rodent ulcer were treated chiefly with X-ray and were markedly improved.—Mewborn.

Ultra-Violet Ray Anaesthesia in Minor Surgery. Brockbank. (*American Medicine,* 1903, Vol. V., page 648.)

The author reports two cases of local anæsthesia produced by the ultra-violet ray. The first case was an incised wound of the fore-arm exposing the tendons for a distance of two inches. After fifteen minutes' exposure to a No. 4 Munnin

lamp, five sutures were taken without any discomfort. In the second case a fatty tumor was removed from below the breast after a twenty minutes' exposure to a No. 4 lamp, at a distance of eight inches. There was no pain in removing the tumor or in subsequent suturing. The most plausible explanation of this result was probably the strong mental suggestion to the patient rather than any direct effect of the rays.—Mewborn.

The X-Ray and the Finsen Light in the Treatment of Lupus. A. D. Rockwell. (*Medical Record,* 1903, Vol. LXIII., page 575.)

The author considers that a positive answer to the question, as to whether the X-ray is better than the Finsen ray in the treatment of lupus vulgaris, cannot be given at the present time. In the case to which he makes allusion, a lupus vulgaris of the chest of long standing, had failed to be benefited by prolonged treatment by the Finsen ray, but was completely cured by fifty-five exposures to the X-ray in a period of four months. He considered that the reverse experience might in either case be explainable by personal idiosyncrasy and that the operator in his choice must study the personal equation.—Mewborn.

BOOK REVIEW.

The Elements of Pathological Anatomy and Histology for Students.. By Walter Sydney Lazarus-Barlow, B.A., B.C., M.D., F.R.C.P., Philadelphia: P. Blakiston's Son & Co., 1903. (8vo. 692 pages, with 171 illustrations.)

After a very brief introductory chapter, the contents of this work is divided into two parts. The first part deals with general pathological anatomy and histology, and contains 233 pages divided into eleven chapters, of which the last five deal with neoplasms. The second part completes the work and contains twenty-one chapters on the pathological anatomy and histology of the special organs and tissues. The treatment of these subjects is conventional and not as suggestive as might be desirable even for undergraduate students. Perhaps the reasons for this are that the author evidently intends this volume as a companion to his "Manual of General Pathology," in which he has discussed the nature of many of the processes of disease and that he has endeavored to be as concise as possible. In reading the book, one cannot help feeling that this last endeavor has led the author into a rather superficial treatment of his subject. In a brief review, it is not possible to enter into details, but we may cite the section on "Fatty Change," and the chapter on the pancreas in illustration of our meaning. Fatty change is divided into fatty infiltration and fatty degeneration, which are represented as distinct conditions of widely different significance, but it is doubtful whether the student who depended upon this work for his knowledge of the subject could gain a clear conception of the nature of that difference. The chapter on the pancreas, a trifle over two pages long, appears to be very inadequate. The relation between that organ and diabetes mellitus is mentioned, but in a way that is very obscure, and surely the statement that "the existence of the merest trace of normal functionating pancreatic tissue seems to prevent the occurrence of diabetes" is misleading. It would not have been difficult or required much space to call attention to observations that have appeared to connect diabetes with changes in the islands of Langerhans. We see no reason why the student should not receive some hint of such studies; if not in the text, why not in a series of references at the end of a section? The two cases cited appear to us to be typical. A little more than thirteen pages are devoted to the skin.

The illustrations are a little harsh and deficient in detail, but appear to be well chosen and it is refreshing to meet with original drawings rather than copies of long familiar cuts.—E. K. D.

PLATE XXXI.—To Illustrate Dr. William Osler's Article.



A Case of Chronic Purpuric Erythema (Eight Years Duration), With Pigmentation Of Skin And Enlargement Of Liver And Spleen.

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A CASE OF CHRONIC PURPURIC ERYTHEMA (EIGHT YEARS DURATION), WITH PIGMENTATION OF SKIN AND ENLARGEMENT OF LIVER AND SPLEEN.

By WILLIAM OSLER, M.D.,

Professor of Medicine, Johns Hopkins University.

THE following remarkable case presents two points of interest, the character and duration of the skin lesion and the associated induration of the liver and spleen.

A glance at the Plate shows the condition of the skin of the legs, and Mr. Horn (one of the staff of artists of my colleague, Professor Kelly), has beautifully depicted the lesions, of which the more striking is the uniform pigmentation. Scattered over this brown skin are areas of hæmorrhage in all stages of transformation, shown as the deep red spots, slightly raised and in part hyperæmic, though not disappearing on pressure. There is a general brawniness and induration of the skin of both legs, and the picture serves to illustrate any section of either leg. Just above the iliac crests the pigmentation is less intense and there are numerous isolated areas, slightly raised, of hyperæmia, hæmorrhage and infiltration, the color of which does not disappear entirely on pressure. Then at a greater distance there are early, raised, hyperæmic lesions, which look a little infiltrated like wheals and disappear completely on pressure. These purely erythematous and wheal-like lesions are seen also on the neck and arms.

The chronicity is one of the most unusual features; the recurrence in crops is a common characteristic of lesions of the erythema group. I have reported a number of instances of recurrence of attacks during a long period of years,[1] but in this one, scarcely a day passed without the appearance of fresh spots. Such an extraordinary degree of pigmentation is rare.

[1]The Visceral Lesions of the Erythema Group, *Amer. Jour. of Med. Sciences*, 1895, and *British Jour. of Dermatology*, Vol. 12, 1900.

The associated enlargement of the liver and spleen gives to the case an additional interest. From the uniform increase in size and the hardness the condition of the former is probably one of hypertrophic cirrhosis, and is related directly to the recurring hæmorrhages. The numerous skin lesions which occur in cirrhosis of the liver are rarely seen early in the disease. Recurring purpura, purpuric erythema and urticaria, sometimes quite large subcutaneous hæmorrhages are occasionally met with. They are, I think, more frequent in the hypertrophic than in the atrophic form. A patient brought to me by Dr. Tompkins, of Charleston, W. Va., a large, robust, temperate man, had a very greatly enlarged liver and an enlarged spleen, with, for nearly three years, recurring attacks of hæmorrhage and urticarial wheals on the legs.

There appears, however, to be a group of cases, of which the one here reported is an illustration, in which the recurring cutaneous hæmorrhage is the primary trouble, and leads to the cirrhosis of the liver and the enlargement of the spleen. In the remarkable condition known as hæmochromatosis there is a wide-spread destruction of the red blood corpuscles (in a majority of the cases due to some unknown toxic agent), leading to a pigmentation of the skin and a deposition of the iron-containing pigment in the internal organs, and in time to cirrhosis of the liver and of the pancreas, and finally to a diabetes —the so-called bronzed diabetes. In at least four of the cases in Anschutz's paper (Deutsches Archiv f. Klin. Med., Bd. 72), extensive purpuric eruptions occurred. In one of my cases the patient had had during three years, scores of outbreaks of purpura and urticarial blotches on the legs, sometimes with fever and the occurrence of great erythematous welts.[2] He had general pigmentation of the skin with great enlargement of the liver and spleen. There have also been cases of hæmochromatosis associated with hæmorrhagic pleurisy, so that it is quite possible the irritation caused by the deposition of a very large amount of the blood pigment in the liver and spleen may be sufficient to cause cirrhosis with enlargement.

The arthritis, a common enough feature in forms of erythemic purpura, and usually regarded as rheumatic in its origin, may possibly be of a character similar to the arthritis described by the surgeons in cases of extensive hæmorrhage, and of which I have seen two cases, one following a fracture of the kidney, and the other the recurring hæmorrhages into a pancreatic cyst.

[2]Hæmochromatosis and Hypertrophic Cirrhosis of the Liver, *British Medical Journal*, Dec. 9th, 1899.

Clinical Summary.—*Healthy man of good habits; for eight years recurring erythemic purpura of the legs, leading to general pigmentation of the skin, with patchy erythema and purpura of the trunk and of the extremities; enlargement of the liver and spleen.*

John W. Oliver, aged 33, stone-mason, admitted to the Johns Hopkins Hospital May 27th, 1901, complaining of an extensive skin rash and soreness in the wrists, ankles and knees.

His family history was good; no similar troubles in any of the members.

Personal History: As a child he had pneumonia, and when twelve years of age was ill for three weeks with inflammatory rheumatism. Nine years ago he had a short attack of malaria. He has had gonorrhœa twice; never had syphilis. He has never had any skin rash except the present one. He has had no bleeding from the gums and has never bled profusely from cuts. He is a temperate man.

Present Illness: In September, 1894, he first noticed a few red spots about the ankles. From this time his legs have never been free from blotches and red and brown stains. The condition has gradually grown worse, extending slowly up both legs. Within four years both were as completely covered as at present. Two years ago the patient first noticed a few spots on his left arm. Six months ago he began to have them on the right arm. His face has remained free. He has had no itching. For the first six years he lost no time from work on account of this trouble. He got accustomed to it. He has been treated by scores of doctors, usually, he says, for syphilis, and has taken a good deal of mercury and iodide of potassium. For twelve months he has had a good deal of pain in the joints, chiefly a soreness in moving the joints; no redness; no swelling. On several occasions the soreness has been such as to incapacitate him from work. Three years ago he had varicose veins and small ulcers on both legs. Within the past year he has had several attacks of giddiness and once or twice felt nauseated. For seven years his general health remained excellent. During the past year he has lost about ten pounds in weight, and thinks he is not so strong as he was.

Examination: A very robust, healthy-looking man, not anæmic, with a very well developed muscular system. The skin of the face is perfectly normal. When stripped he presents a most remarkable appearance from the extensive brown discoloration and extravasation of blood into the skin of the legs. As will be seen in the Plate, which is a very vivid representation of the condition of the outer portion of the left leg, there are: (1) a general, deep, brownish pigmenta-

tion, almost uniform, showing here and there a few areas on which it is less intense; (2) widespread areas of hæmorrhagic infiltration into the skin; (3) in places more localized and distinctly raised areas with hyperæmia and hæmorrhage, like the lesions of a purpura urticans; these could be seen in all phases and grades of infiltration; (4) a general scaliness. The skin everywhere feels hard and brawny. The condition extends to the groins and behind just to the sacral region. In the upper part of the thighs the skin is not so thick and indurated. Toward the groins, too, where the hæmorrhagic exudate is much less intense, the isolated raised spots surrounded by areas of hyperæmia are more numerous. In the skin just above the iliac crest the same features are present, the hæmorrhagic pigmentation, the isolated areas of infiltration, which are slightly raised and chiefly hyperæmic. At a considerable distance is seen a single spot a little more than a centimeter in diameter, slightly raised, hyperæmic, which disappears entirely on pressure. The greater part of the skin of the back is free. There are only a few spots above the sacral region. In the left interscapular area is a patch 4 cm. in extent with erythema, exudation and a few small hæmorrhages. On the back of the neck, just above the line of the collar, there is an area of diffuse erythema with infiltration. On the front of the chest the skin is normal, except for a couple of small patches toward the axillary fold.

On the left arm there are curious linear ecchymoses along the posterior axillary fold and over the region of the shoulder. Some of these are fresh; others fading. There are a few isolated spots of hæmorrhage and infiltration on the skin over the biceps. On the extensor surfaces of the fore-arms there are numerous isolated, slightly elevated areas, many of which have become deeply hæmorrhagic; others resemble infiltrated wheals. There are a few small areas upon the back of the hand.

On the right arm there is some diffuse staining of the skin from old hæmorrhages, and there are scattered wheal-like bodies which disappear entirely on pressure. On the outer surface of the fore-arm there are several fresh nodular areas, some erythematous, others hæmorrhagic.

The joints are nowhere enlarged. The lymph glands in the groin are considerably enlarged. Genitalia normal. Examination of heart and lungs shows no special change.

Abdomen: The liver is considerably enlarged; the edge of the left lobe could be felt midway between the ensiform cartilage and the navel, firm and hard. In the nipple line it is 7 cm. below the costal

margin. The spleen is enlarged; the edge can be felt 4½ cm. below the costal margin.

The patient had no fever. Numerous blood counts were made. On admission the reds were nearly 5,000,000, leucocytes 3,000 per cubic millimeter, hæmoglobin 70 per cent. Coagulation time, 3 minutes. Differential counts were made on four or five occasions. On admission the only striking change was that the eosinophiles were 8 per cent., small mononuclears 12 per cent., polymorphonuclears 74 per cent.

During his stay in hospital he improved very much and his hæmoglobin rose to nearly normal.

The continuous warm bath was used in this case for several weeks, the patient remaining seventeen or eighteen hours a day in the tub. The condition of the skin of the legs improved very much, but fresh crops of hæmorrhage occurred at intervals. He complained of some pains in the joints; never any acute swelling.

Cultures were made from the blood, but nothing grew.

The urine was examined repeatedly. The specific gravity was always high, above 1,020; there was no bile, no albumen, no sugar, no tube casts; there were no abnormal ingredients.

A portion of the skin of the leg was excised and showed much iron-containing pigments in the connective tissue of the corium and an increase in the small mononuclear elements. There was no special distribution of the pigment about the cutaneous glands.

The patient remained in hospital until August 12th, and he left with the local condition somewhat improved.

Patient seen again February 18th, 1902. He thinks there is no special change. So far as the legs are concerned very little change; still deep brown pigmentation and marked superficial scaliness. Evidently a period with very few fresh spots; one or two about the knees. A quite marked change is the increase in the size of the inguinal glands, which both above and below Poupart's ligament are seen as large bunches. The outer sides of the thighs are very much indurated and the skin quite hard and sclerotic. In places there are little dried scabs. Very few fresh spots over the body. The edge of the liver can be felt about 4 cm. below the costal border in the parasternal line, hard and firm. In the middle line it reaches to mid-way between the navel and the ensiform cartilage. The spleen is about the same size as it was, hard and firm. The face is quite clear. The appetite is good; general condition good. The hands are a little involved.

There is general erythema over the ankles and over the backs of the hands.

The patient died of pernicious malaria on February 6th, 1903, and I am indebted to Dr. A. H. Briscoe, of Tioga, Louisiana, for an account of his last illness. There was no autopsy.

"WHITE-SPOT DISEASE."

By James C. Johnston, M.D., New York, and Samuel Sherwell, M.D., Brooklyn.

(from the pathological laboratory of cornell university.)

THE patient is Dr. Sherwell's. She was presented for a diagnosis of her disease to the New York Dermatological Society, and I suggested that she submit to a pathological examination. The photographs are the work of Dr. B. H. Buxton and his assistant in the photographic department of Cornell, to whom our best thanks are due.

History: The patient is a woman twenty-six years of age, born in Ireland. There is nothing worthy of note in the family history. She herself enjoys fairly good health, but is thin and evidently neurotic, with a poor physical development; "a human weed," in Dr. Sherwell's apt phrase. She has suffered from time to time with evanescent erythematous eruptions affecting the face chiefly, which have, however, nothing to do with the present condition.

The lesions which form the subject of this paper began thirteen years ago; her first menstruation did not appear until some months later. According to the patient's statement, the number of lesions has gradually increased, while they have changed very little individually. The area most characteristically affected is the anterior surface of the chest, extending from the outer third of the left clavicular region to the middle third of the right, and from the shoulder girdle to the upper margin of the breasts. There are in addition striate atrophic spots about the root of the neck and over both scapulæ; perhaps the terminal stage of older lesions. The patient's statement is not clear on this point.

The spots on the chest are arranged like beads in the successive

rows of a necklace, following the skin lines and roughly corresponding to the distribution of the vascular supply, running across from one side to the other. The individual lesion is raised only very slightly above the surface, and is smooth to the touch. The smallest, presumably the earliest, are no larger than the head of a white pin. The outline is sharp and irregular, without a trace of inflammatory areola, running often into tiny projecting points as it increases in size. There is not much tendency in the lesions to unite, but when this occurs, the spots form an end-to-end juncture, so that they are never of great extent. Certain of them exhibit a central point which clinically gives the appearance of umbilication, but in reality is a tiny elevation due to a separation of the epidermis (see histology). The color is by far the most striking feature of the disease. It is the dead-white of snow. The chest looks as though it had been spattered with a white-wash brush.

In the course of time, to which no definite limit can be set, certain of the spots undergo involution. A thin scale separates and there is left an atrophic area corresponding exactly to the white spot which preceded it. This atrophy may be punctate or striate, and is not different, except in distribution and outline, from that resulting from lupus erythematosus, symmetrical atrophy, or ordinary *striæ atrophicæ*. There are no subjective symptoms, but the patient scrapes off the scales from time to time and rubs the other lesions from the annoyance their presence gives her.

Histology: A single patch was removed with a cutaneous punch from the left side just above the breast, including the entire diseased area so far as could be seen clinically. The lesion showed a central point which I took to be an umbilication, but which resolved itself into the vesicle-like formation shown in Fig. 1. Sectioning was done in paraffin and staining with hematoxylin-eosin, Van Gieson's picrofuchsin, Nocht, hematoxylin-orange-acid orcein.

The lesion is as nearly a pure degeneration as it is possible to imagine in the skin where processes are more than apt to show great complexity. It is limited to the papillary body and the upper portion of the reticular layer. There is no uniformity of distribution; the degenerated area stopping abruptly at certain points, to begin again, apparently in lesser degree, a little farther on. It reaches greatest development naturally in the central portion of the section which corresponds with that of the excised skin. The irregularity of distribution is in conformity with the clinical appearance of the spots noted above.

In the degenerated mass, the collagen has altogether disappeared, its place being taken by a granular material which has lost its characteristic acidophile staining tendency. It has little or no affinity for eosin, orange or fuchsin. There is no deposit of any foreign material like calcium salts, such as I expected to find. The elastic tissue is broken up into short lengths of fiber or granules which take the acid-orcein stain more deeply than the normal tissue. The elastic network covering the papillæ has completely disappeared where the process is most advanced, and in other places shows beginning rupture. Some of the vessels forming the plexus at the base of the papillary body are preserved. They are loosened from their attachments to the surrounding tissue and are often dilated, doubtless a result of diminished tissue tension. The endothelial cells are swollen and project into the lumen. In places the lumen is perceptibly narrowed in this way; in others, there is complete collapse of the walls. These appearances, except endothelial swelling, may be artefacts. Thin paraffin sections are prone to them, but they are constant here even when there is no distortion in the section.

An irregular lymphocytic infiltration sheaths the vessels in places and in others seems independent of them. The number of mononuclear cells is very small. Proliferated and swollen fibroblasts are to be found here and there. These changes are shown in Fig. 2. The area of degeneration shades gradually below into the subcutaneous tissue.

The epithelial changes are secondary. Interpapillary projections disappear in places where degeneration is complete, and while there is nothing to prevent the growth of epithelial cells into the subjacent tissue, they do not proliferate. The rete is reduced to a few layers of cells, four or five, which show marked hydrophic degeneration. The horny layer is very slightly increased; the granular layer absent or reduced to the thickness of a single cell. The space between the epithelium and degenerated connective tissue, while it contains granular material which may be precipitated albumen and an occasional leucocyte, must be regarded, if not as an artefact, at least as accidental, possibly the result of rubbing of the clothes. (See Fig. 1.) Separation would naturally be very easy in such a condition. Fibroblast proliferation and lymphocytosis are evidently of no great importance in the process, so there remains only the degeneration of the connective tissue to account for the clinical appearance.

There is no involvement of the sweat apparatus, the only appendage present.

As to the cause of such a tissue change, one can only offer conjecture, but reasoning from analogy in other organs, so pure a degeneration ought to be due to local interference with nutrition through diminished blood and lymph supply. I believe that such is the case in this instance, and in spite of the fact that I cannot demonstrate it to my own complete satisfaction,—it is not a capillary thrombosis such as is found in erythematous lupus, but an obliteration of the smaller branches in the recticular plexus. The obliteration may be congenital or acquired, due to failure of complete canalization or blocking by swollen endothelium. The latter seems more probable. This must occur only in the smallest vessels or the lesions would be larger. The irregularity of the spots is explained by their occurrence in the distribution of the small twigs.

There seems no reasonable explanation of the whiteness of the spots except one, a phenomena which is not unfamiliar. The degenerated skin held to the light is translucent, while in reflected light it appears perfectly opaque. I am at a total loss to understand why this should be so in white-spot disease and not in other atrophies. There may be some chemical difference in the products of the degenerative process; this, however, is beyond the question and hardly seems worth while to determine.

The disease should be classed with the atrophies, next to symmetrical atrophy, which, perhaps, closely approaches it. The name, "White-Spot Disease," which Westberg gave it in 1901, is striking and characteristic enough to deserve perpetuation.

Treatment: After the nature of the disease was determined, it was evident that the best result to be expected is an atrophic spot replacing the white appearance. It was obviously impossible to remove each spot surgically, and the only measure that remained to be considered was the use of revulsives strong enough to cause an active inflammation and so dissolve and carry off in the inflammatory serous and leucocytic exudate the remains of the degenerated fibers. I recommended the use of a saturated solution of resorcin in alcohol, applied three or four times a day. The result has been gratifying, and with a minimum of reaction; the white spots are on the verge of disappearance. In another case, I would use a more vigorous method, that which was recommended by McGuire, of Washington, in this JOURNAL for the removal of xanthelasma of the lids, the application of crystals of trichloracetic acid, touching only the spots themselves. One application would doubtless suffice. The reason for the failure

of Westberg's salicylic acid and bichlorid is that he used them in an ointment and not in sufficient strength.

Literature: The first case I ever saw was one exhibited in Chicago by Dr. F. H. Montgomery, in 1901, before the American Dermatological Association. I was not content even at that time with the generally expressed opinion that it was a peculiar form of morphœa. The correctness of that stand is obvious from my study of this case. The patient was a young woman, and the lesions corresponded in every particular with those I have described in both localization and appearance.

Westberg's case is the only one in the literature, although others must have been seen and called by other names. Even so, they have not been reported. The following is an abstract of Westberg's work (*Monatsch. für prakt. Dermat.*, 1901 Vol. XXXIII, p. 355). I am quoting from the *British Journal of Dermatology*, as I have not the reference at hand. The article has a photograph and a colored plate of the histology.

The patient was a girl of eleven years, strong and healthy. The spots appeared about two years previous to the observation, following measles. There were sparsely and discretely scattered about the thorax, hemp-seed to bean-sized, round and oval spots, chalky-white in color and set in normal skin. Their surface was smooth and they exhibited "playing-card" resistance to the touch. The spots on the whole corresponded to the lines of cleavage. There was a slight elevation when the skin was put on the stretch. There was no desquamation, no bullous formation, or other change in the spots. Histologically, Westberg found hypertrophy of collagen, an *increased* staining power of the affected fibers and numbers of mast-cells.

The clinical appearance of the three cases is plainly identical. The difference in histological findings is probably due to the fact that Westberg's case had lasted at most two years as against thirteen in mine. It is a common thing for the first change in a fibrous tissue degeneration to be a swelling of the fibers, followed after a variable period by a breaking up. In the early stage also they have an increased affinity for acid dyes. The chemical change must be identical in order to give the dead-white opaque appearance. I cannot understand his discovery of mast-cells in numbers. There was not one in my sections. The short duration of the disease also explains why he saw none of the exfoliation which sometimes occurred spontaneously in

PLATE XXXVI.—To Illustrate Dr. J. C. Johnston's Article.

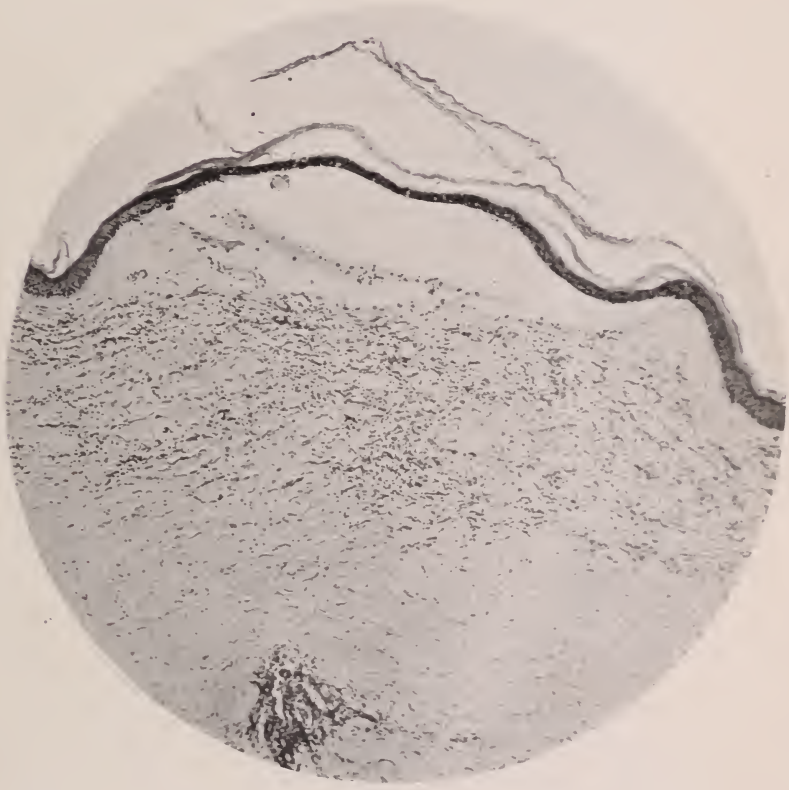


Fig. 1.

Fig. 1. Entire lesion (X 60). Separation of epidermis in vesicle-like formation. Degenerated, homogeneous-looking papillary body with sparse lymphocytosis below. Dilatation of lymph and blood spaces.

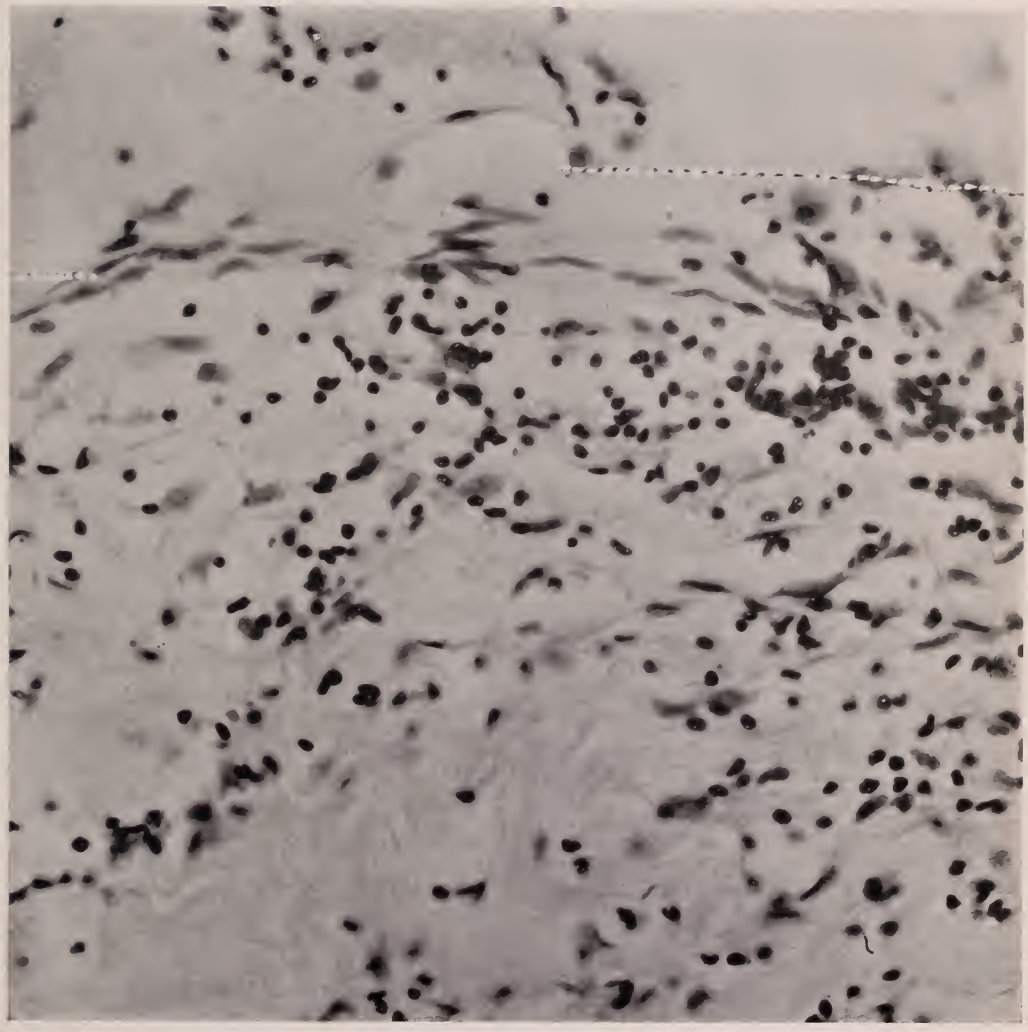


Fig. 2.

Fig. 2. X 200. Taken from border of space downward below place marked X in Fig. 1; *a*, obliterated capillary; *b*, dilated capillary lined with swollen endothelium. Degeneration extends very little below *a*. Lymphocytosis and fibroblast proliferation.

our case. It will undoubtedly occur after a time, and it is equally safe to predict that slight traumatism would separate epidermis from degenerated corium.

The introduction of a new disease hardly needs an apology when it is accompanied by a reasonable explanation of its nature and an efficacious method of treatment.

SARCOMATOSIS CUTIS.

By Grover William Wende, M.D.,
Clinical Professor of Dermatology, University of Buffalo.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE patient was a colored woman, thirty-eight years of age, who had always been healthy. Her family history was unknown to her, beyond the fact that two of her sisters died of consumption.

Previous history: Patient states that she had no knowledge of any previous severe illness. The disease made its appearance two years before her death, over the anterior surface of the tibia of the right leg, appearing simultaneously at several points, and was distinguished by increased pigmentation and the formation of tubercles. The condition somewhat resembled varicose veins, and was treated with an elastic stocking.

After several months the lesions disappeared and were absent for an entire year. Then they returned, following a contusion of the leg caused by a fall; the new growths occupying the exact site of the old injury. The patient became aware of their existence by a spasmodic burning and pain. In six months the disease had spread over almost the entire surface of the leg, and the pain was augmented, being most severe when she attempted to walk.

Condition at First Examination: When the patient was first seen, through the kindness of Dr. Menges, in February, 1899, she was, apart from the special disease, apparently in good health. Her appetite was normal and her body well nourished. The pain, however, was so severe that she was obliged to take to her bed. From the ankle-joint to a point near the patella the skin showed dark, irregular

patches, the edges of which were clearly defined. A striking peculiarity was the dark pigmentation where the lesions had receded without scar. This condition varied in different portions. The color was a very dark brown, although, in spots, a purplish hue was assumed. Within the pigmented area were found numerous lesions, varying in size from a millet-seed to a hazel-nut, the borders of which were not well defined, but gradually faded into the surrounding skin. The nodules were painful to the touch; in fact, the patient complained of tormenting pain both day and night, probably neuralgic in character. She declared that from the outset the lesions were sensitive, and they so remained until they grew to about the size of a bean, when the pain gradually diminished. At first they maintained the natural color of the skin; as they increased in size they became darker, assuming a reddish tint. Occasionally there appeared a hemorrhagic spot under the skin in the vicinity of the lesions. There were no enlarged glands in the inguinal region. The nodules showed a marked tendency to group and often coalesced, forming infiltrated plaques which were clearly defined. Up to this time, throughout the entire course of the disease, the lesions were all of the same type, deeply embedded in the skin and varying in size from that of a pea to that of a hickory nut. Finally a few lesions began to break down, resulting in pus formation. The nodules were not surrounded by any definite inflammatory halo; their development was gradual. The patient began to fail in general health, was subjected to partial loss of appetite, slept badly and became intensely nervous and irritable, especially after the hypodermic use of arsenic. After a short time this treatment was abandoned and the internal use of the same remedy, in the form of Asiatic pills, was briefly tried.

The blood examination showed no leucocytosis; the proportion of the various forms of leucocytes was normal. This condition harmonized with that revealed by several previous examinations.

Later Examination: About eight months after (October, 1900) I saw the patient, through the courtesy of Dr. Siegfried, at the Buffalo Sisters of Charity Hospital, and afterwards saw her several times. The doctor also furnished me with the photographs representing the condition as it presented itself at the time, and with the further facts relating to the history of the disease. The lesions were still confined to one leg. The progress from the last time when I had observed her had been gradual and revealed striking features, as the area had not extended, while the plaques had undergone marked changes, very few

of the nodes now existing. In certain places the nodes were necrotic, or ulcerated. Distinct from and interspersed among these lesions were exuberant fungoid excrescences, closely pressed together, presenting for the most part a uniformly lobulated surface of soft consistency and pink color. Some of them were two inches in diameter and one inch in height; others were quite small. The ulcerated portions were covered with scabs. There was also a plentiful and offensive discharge. The elevations were irregular, being most marked on the border of the affected area. The hypertrophic growth was suggestive of the later stages of mycosis fungoides.

Progress and Treatment: Shortly before her death it was thought best to amputate the leg at the hip, but when it was discovered that the disease had made its appearance on the back, revealing both nodules and marked pigmentation, the idea was abandoned. The lesions were located opposite the first dorsal vertebra and remained unchanged to the time of her death, neither ulcerating nor producing pain.

The patient remained in the hospital two months before she died. The progress of her condition was gradual; her temperature ranged from normal up to 101½ without any regularity of occurrence, probably influenced by absorption of the pus. The urine did not contain any albumen or sugar. Pulse varied from 96 to 140. Rest and wholesome diet were prescribed and the treatment was mainly directed towards the mitigation of the persistent pain. Charcoal dressings were applied to the ulcerated surface. The injection of cacodylate of sodium was again resorted to, and this was continued during the most of her stay in the hospital, without, however, any visible beneficial results. Ten days before her death she had a slight cough, but examination of the lungs failed to detect any pulmonary symptom. Marasmus continued to increase until she literally became skin and bone, afterwards gradually wasting away until death ensued. Unfortunately, no autopsy was held.

HISTOLOGICAL EXAMINATION.

Sections of a growth removed in its earliest stage from the vicinity of the knee were hardened in alcohol and embedded in paraffin. These furnished the basis of the first diagnosis and showed that the cell infiltration commenced in both the lower reticular layer and the upper hypoderm. This infiltration existed in connection with the blood vessels, hair follicles and sebaceous glands. There were also small,

diffuse collections, not so definite in form and probably connected with the lymphatics. The fibrous as well as the elastic tissue was well preserved, and showed no degenerative reaction, but, where the cells formed a localized mass, the fibers of the tissue had been separated. The cells composing the process appeared like connective tissue cells. Some of them were oval, others round, and the nucleus, which was deeply colored, was evident. The cells were large and of various shapes, but were quite uniform in size. In the use of the several nuclear stains it was often found that chromatin was abundant and the nucleus occupied almost the whole of the cell; at other times the protoplasm seemed to constitute the most of the cell, having only a small deposit of chromatin. The fibrous reticulum between the cells disappeared. In the early tumor growth there was no infiltration in the epidermis; a narrow layer of sound tissue existed between the papillæ and the tumor formation.

A second segment was taken from a tumor undergoing degeneration, by means of which it was ascertained that the papillary processes were distorted. At first it seemed as though the epidermis had entirely disappeared. Many leucocytes were found in the deeper layer of the epidermis. The cells of the stratum mucosum were much pigmented. Those of the tumor growth showed a marked tendency to break down, and had now become irregular both in shape and size. Many of them gave evidence of degeneration; they were loosely joined, and the intervening spaces were probably large vacuoles situated in the protoplasm.

In the region of the infiltration the connective tissue had almost wholly disappeared. The more considerable deposits of cells were found in the immediate vicinity of the glands. The arteries and veins had become more numerous and were somewhat enlarged; in a number of sections belonging to the more advanced condition they were completely filled with cells. The elastic fibers, as well as the connective tissue, showed no changes, but, in the maturer condition, became more indefinite. No plasma cells were discovered throughout the affected section. Mitosis was very rarely seen. Sections stained for bacteria furnished only negative results.

According to the microscopic findings, we have here to do with a deposit of new cells which has taken place in different parts of the hypoderm, proliferating around the lymphatics, forming foci in the neighborhood of the sweat glands, hair follicles and sebaceous glands, and finally reaching the papillary layer. The cells in the new growth

showed no mitotic figures. There was usually a large amount of chromatin in the nuclei. The condition of the blood vessels rendered the growth somewhat peculiar; inasmuch as they were obstructed in the latter stage of the disease, metastasis to some internal organs was to be expected, although the most careful physical examination failed to disclose any such condition. This was looked for while the patient was in the hospital. It was quite unusual not to have an enlargement of the lymph nodes, although a cachexia was present for a long time before death. In the examination of the advanced stages of the growth the cells showed regressive metamorphosis, and there was hardly a perfect one left throughout the mass. There were collections of granular pigment, some within the cells and others on the outside.

Notwithstanding the abundant opportunity already afforded for clinical and microscopical investigation of the sarcomata, there are still many points concerning its precise nature and pathological relations which have not yet been definitely determined. One of the most interesting, although not yet clearly defined groups of diseases of the skin are the tumors designated by Kaposi as "Sarcoid tumors," by which he means:

1. Granuloma fungoides;
2. Multiple idiopathic pigmented sarcoma;
3. Sarcomatosis cutis;
4. Multiple benign sarcoid.

Kaposi does not, however, consider this classification as final. The designation of sarcoid is chosen because the forms of disease here discussed in a certain degree resemble sarcomata. They differ considerably, however, in the revelation of phases which cannot claim alliance with genuine sarcoma.

Dr. Johnston's paper (*Journ. of Cut. and Gen-Urin. Dis.*, July, 1901, p. 305), entitled "Sarcoma and Sarcoid Growths of the Skin," presents strong points leading to possible harmony in the consideration of sarcoma, with both dermatology and general pathology. In a histogenetic classification, he divides sarcomatosis into three groups, fibroplastic (true) sarcoma, the lymphoid cell class, and sarcoid growths. Dr. Johnston ably treats the claims of the so-called sarcoma group. He believes that all are undoubtedly of a fibroplastic origin, and says two of them are possibly granuloma. Receiving the generally accepted opinion, it is reasonable to suppose that mycosis fungoides is *sui generis*.

The clinical history in this case, as well as the microscopical examination, pointed to sarcomatosis cutis of Kaposi's third type.

That author gives the history of a number of similar cases. The disease, he says, is confined to persons of middle age; the tumors appear on the trunk and limbs, may be numerous, are red or pale nodules, and originate in the reticular layer or subcutaneous tissue. The initial ones can be detected only by palpation. The borders are well defined. As the nodules increase in size they take on a reddish tint and present a smooth, shining surface. Very often they run together and form plaques much resembling mycosis fungoides. There is neither glandular enlargement nor blood changes. In some instances the administration of arsenic has brought relief. There are a large number of analogous cases reported, the summary of which is given in an exhaustive paper by Feldt. (*Arch. für Derm.*, Sept., 1900, p. 419). His cases show one striking point of difference from the case now discussed,—namely, the tumors disappeared by absorption through the influence of arsenic, while in this instance arsenic failed. But it is fair to say that the arsenical treatment was not properly carried out, although from the history of the case there must have been a spontaneous disappearance of the new growth early in the course of the disease. It is a question whether the tumors classified by Kaposi with sarcomatosis cutis, placed among the sarcoid tumors of the skin, ought to be classed with that affection, since, pathologically and clinically, they have no special relationship; and whether they should not rather be designated as an independent disease and assigned to a separate class, like mycosis fungoides and lymphoderma.

It can hardly be claimed that the minute structure and clinical course of this affection correspond to sarcomata. This has its own marked and peculiar characteristics. While its etiology is at present obscure, it has been supposed to be infectious. Special attention with reference to this point has been given to the case under consideration, and no evidence of infection could be detected. In fact, there is no positive proof that any one of the sarcoma group is due to microorganisms. In 1892 Neisser, before the German Dermatological Association, advanced the opinion that the cause of sarcomata should be sought among the bacilli, although nothing arising from the investigations of others seems to substantiate his theory. In 1894 Vedeler (*Centralblatt f. Bacteriologie u. Parasitenkunde*, 1894, No. 21) reports on a protozoon found by him in the sarcoma cells. In 1896 Jurgens (*Centralblatt f. Chirurgie*, 1896, No. 31) succeeded in grafting a piece of new cell sarcoma, rich in protozoa, in a rabbit and observed the development of tumors in the second and third generations.

A series of experiments on tumor transplantation and inoculation

PLATE XXXVIII.—To Illustrate Dr. Grover W. Wende's Article.



Fig. 1.

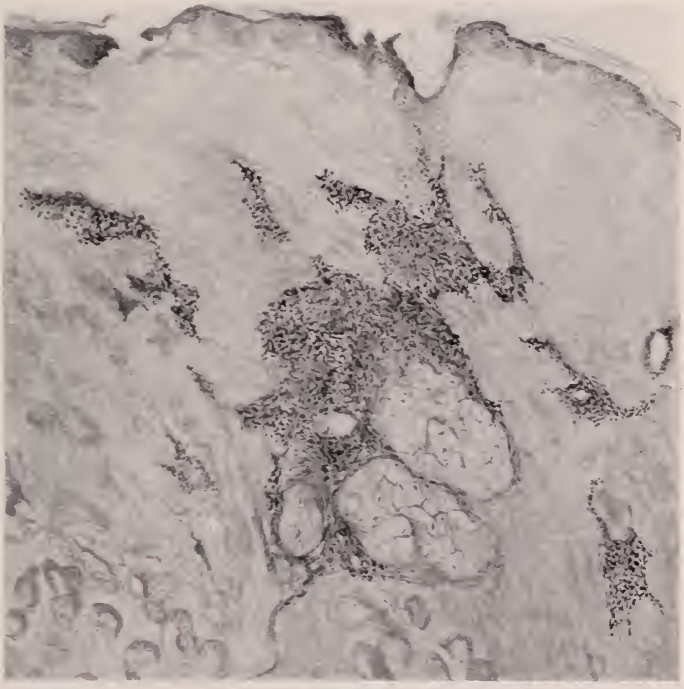


Fig. 2.

Fig. 1. Photograph of right leg, representing lesions as they appeared October, 1900.

Fig. 2. Round cell infiltration, beginning around blood vessels and glands, as seen when the lesions first appeared.

is described by M. Herzog (*Journal of Medical Research*, Vol. VIII, No. 1, p. 74). The original animal which Herzog used was a descendant of the white rat from which L. Loeb (*Journal of Medical Research*, VIII, 44, 1902) derived his sarcoma. Since then L. Loeb has made a series of successful transplantations through many generations. Of course the question may arise whether the resulting growths are genuine sarcoma: but many competent observers who have examined the tissue are in accord with the views of Loeb.

The claim that certain forms of sarcoma are infectious seems to be strengthened by the effect of arsenic employed in connection with them. Probably some of these are the type to which the present case belongs, while others may be classed with that defined as spindle-cell sarcoma, which is influenced by erysipelas toxin.

CONCLUSIONS.

1. Sarcomatosis cutis (Kaposi), which is now designated as sarcoid growths of the skin, is clinically recognized as having its own individual characteristics.

2. It chiefly attacks adults. The initial lesions are small papules deeply seated in the skin. These gradually develop to a certain size, when some break down, suppurate and end in exuberant granulations.

3. Histologically it consists of a round cell infiltration primarily existing in the deeper layers of the skin, around the blood vessels, hair follicles, sebaceous glands and lymphatic spaces. While this is suggestive of true sarcoma, it may present the inception of granuloma.

The etiology is at present obscure: apparently we have to do with an infectious disease.

4. While there is a strong resemblance microscopically to mycosis fungoides, the clinical appearance is so entirely different that one need not hesitate to exclude that affection from consideration, it being separate and distinct from this. The theory of syphilis is contraindicated by the clinical appearance and therapeutic test. Lymphoderma and blastomycetic dermatitis are excluded by the microscopical findings. Carcinomatosis cutis is also ruled out by the microscope, although the clinical appearances in the two are very similar.

5. Taking into consideration the spontaneous disappearance of the tumors: the limitations of the growths to the skin without any remarkable tendency to infiltration of the surrounding tissue: the nonenvolvement of lymph nodes or metastasis, and the fact that the malady remains a cutaneous disease: the conclusion is forced upon us that the present case far more closely resembles granuloma than true neoplasm.

DISCUSSION.

Dr. J. A. Fordyce said that the exact relationship to each other of the various affections included under the general name of sarcoma of the skin was not clearly defined. There seemed to be transitional types between multiple sarcoma, mycosis fungoides and leucaemic skin tumors. Some of these diseases, like mycosis fungoides, were more closely related to the infectious granulomata than to the true connective tissue growths. Bacteriological research may, in the future, elucidate many of the obscure etiological problems in this class of new growths.

Dr. M. B. Hartzell: The sarcoma known to the surgeon differs very widely from the sarcoma of the dermatologist. The former type is usually rapidly progressive, while that of the dermatologist lasts for years and is comparatively benign. Many of the cases reported by dermatologists as *sarcomatosis cutis* last six, seven, even ten years, with very slight evidences of malignancy. On the contrary, the sarcomatous neoplasms of the surgeon not infrequently terminate the patient's life within less than a year. There is evidently a wide difference in the essential nature of the two growths—they are not the same thing.

Dr. Gilchrist: In connection with this subject of sarcoma of the skin, he had seen two or three cases of mycosis fungoides which had been mistaken by surgeons for sarcoma. Malignant overgrowth of moles is considered by many to be of a sarcomatous nature, whereas a number of observers, with whom he agreed, are of the opinion that they are carcinomatous. Of true sarcoma commencing in the skin, he had never seen a case in Baltimore. Pathologists have often described cellular deposits in the skin as being sarcomatous; a diagnosis which we, as dermatologists, would not accept, because similar pictures are so often seen in benign affections of the skin. Dr. Wende's case is a very interesting one, and one which appears to him to belong to the granulomata. He would like to ask Dr. Wende if Coley's fluid was tried? It has produced some fair results, particularly in sarcoma.

Dr. L. C. Pardee: A case bearing on this subject, although it was not exactly of the same sort, appeared recently at his clinic in Chicago. The patient was a child, with a lesion on the point of the chin. Clinically, it was a rapidly growing sarcoma, but microscopically it proved to be a granuloma. Unfortunately, the case disappeared from view before a complete examination could be made. The glands in the neck were enlarged and suggested tuberculosis, but nothing of a tuberculous nature was found microscopically.

Dr. Bronson wished to refer to a case under his observation at the New York Polyclinic, in which some symptoms like those described by Dr. Wende, especially the intense pain, were present. In this case the initial lesion was on the nose, and was removed. He was unable to learn what the result of the microscopical examination had been. Subsequently, similar lesions—large, dusky, very vascular tumors, appeared about the

ears, neck and lower extremities. The pain produced by these growths was most intense. The case ended fatally, death evidently being due to exhaustion. Dr. Elliot found sarcomatous elements in the growths, especially involving the nerves, which accounted for the severe neuralgia accompanying the disease.

Dr. Wende (closing the discussion): In reply to Dr. Gilchrist, he would say that Coley's fluid had not been used. Favorable results following its use in spindle celled sarcoma have been reported. That he had sought to establish that this was not a sarcoma, but a species of granuloma; not amenable to the use of the fluid. He agreed with what has been said concerning the indefiniteness and uncertainty attaching to the various types of sarcoma. The suggestion made by Dr. Johnston in a paper read before the Association two years ago seemed a good one—namely, to classify the so-called sarcomata of the skin according to the pathological findings, although granting that these were of little use to the clinician. He did not see why the lesions of leukaemia or mycosis fungoides should come under the general heading of sarcoma. Careful bacteriological examination in the case under discussion proved to be absolutely negative.

PARAPSORIASIS.

(Including the *erythrodermies pityriasiques en plaques disséminées.*)

By L. Brocq, Paris, France.

Translated by A. D. Mewborn, M.D.

In September, 1897, I published in the *Revue Génerale de Clinique et de Therapeutique* (*Journal des Practiciens*), a description of cases observed in the clinic at Hôpital Broca-Pascal with an eruption which I called *érythrodermies pityriasiques en plaques disséminées.* These dermatoses, which are relatively frequent, in France at least, are characterized by the description which I gave, as follows:

1. An almost complete absence of pruritus.
2. A very slow evolution.
3. A distribution in circumscribed, sharply defined patches, whose dimensions are from 2 to 6 cm. in diameter, and which are scattered here and there over the tegument.
4. An almost complete absence of infiltration of the derma.
5. A pale redness (pinkish-colored).
6. A fine pityriasic desquamation.
7. An extraordinary resistance to the local applications usually

employed in the treatment of psoriasiform or pityriasic seborrhœa; in fact, only yielding slowly and imperfectly to the most energetic applications of pyrogallic acid.

Such in brief are the main points in the clinical physiognomy of this morbid type, and I have been pleased to see that the question attracts attention in America and that my esteemed confrère, Dr. J. C. White, has published several cases since then.

But since my article of 1897, I have had occasion to observe other cases, and to study other closely allied morbid types, which cannot be completely identified with these. I have followed with closest attention the articles which have appeared in other countries upon this difficult subject, and the result of my observations and deductions has been a recent contribution which appeared in the *Annales de Dermatologie et de Syphiligraphie*, May, 1902, entitled "*Les Parapsoriasis.*"

Specialists, who are particularly interested in this question, would do well to refer to the original article, as I will here only give a brief résumé. I might add that since the appearance of the above-mentioned article, I have observed other facts bearing upon the question, which, with a complete study of the histology of these affections, and especially their relation to mycosis fungoides, will soon be published as the inaugural thesis of my esteemed pupil, M. Civatte. I cannot, nor do I wish to anticipate his researches, and will content myself with a general review of the parapsoriasis question as presented in my article of 1902.

History: For the past decade there have appeared from time to time articles upon a relatively rare dermatosis, characterized by a redness of the skin and by a more or less marked dry desquamation (the aspect varying with the case); sometimes the eruptive elements were minute, having scarcely the dimensions of a pin-head or a lentil, at other times the lesions were as large as the palm of the hand or even larger. The coloration and desquamation might be more or less marked, but they all had the following characteristics in common; (and it is this which, up to a certain point, permits us to unite them into a common group, while recognizing intermediate types which serve to distinguish them); 1, slight or no infiltration of the tegument; 2, slight or no pruritus; 3, extremely slow evolution; 4, only slight tendency to heal.

These facts have all been emphasized first by Unna, Santi and Pollitzer[1] under the name of *parakeratosis variegata;* then by Jadassohn[2] under the designation of *eigenartiges psoriasiformis und lichenoides exanthem*, and of *dermatitis psoriasiformis nodularis;*[3]

then by Neisser[4] under the name of *lichenoiden eruption;* by Fritz Juliusberg[5] under the name of *psoriasiformen und lichenoiden exanthem,* and more recently under the name of *pityriasis lichenoides chronica;* by C. Boeck[6] under the name of *dermatitis variegata;* by Radcliffe Crocker[7] under the name of *lichen variegatus;* by Colcott Fox and J. H. M. MacLeod[8] under the name of *parakeratosis variegata,* or better of *resistent maculo-papular scaly erythrodermias;* and finally by V. Casoli[9] under the name of *dermatosi squamose anormale.*

Isolated cases of these affections have been described by Felix Pinkus, by Rona, by Eudlitz, by Méneau, by J. C. White, by Ravogli, by C. J. White, etc., etc.

Pathological anatomy and Histology: While all the characteristics of this group are not strictly comparable, they present, nevertheless, as has been stated above, certain common features which permit us to establish a large morbid group. Histologically this group is characterized by an infiltration of round cells about the dilated papillary vessels, by a flattening of the papillæ and a marked tendency to their disappearance; by a marked œdema of the upper layers of the derma, and of the epidermis; by an almost complete disappearance of the germinative layer; by a dilatation of the intercellular spaces in the prickle layer; by an œdema of the granular layer which is wanting in places; by the absence of the stratum lucidum; and by the absence of nuclei in the horny layer, except over the places where the germinative layer is absent—at these points the nuclei persist in the horny cells.

Symptomatology: The lesions are characterized by their long duration; the slowness of their evolution; their torpidity; the slight disturbance of the general health; the absence of pruritus; the superficiality of the process which consists of a variable redness of the skin and of a more or less pronounced pityriasic desquamation (which may be absent); and finally by their extraordinary resistence to all local medication. But in this group, so defined from a general point of view, I think from my personal observations, there may be established the three following subdivisions, corresponding to very distinct varieties, when typical cases are compared, but which are intimately allied by transitional forms.

FIRST VARIETY (VERY CLOSELY RELATED TO PSORIASIS).

Parapsoriasis guttata: (Probably to this type belongs the case reported by Jadassohn).

Parapsoriasis guttata is a macular or flattened papulo-squamous eruption, without any noticeable infiltration of the derma, varying in color from a slightly brownish pink to a brownish red according to the localization, very slightly or not at all pruriginous. The scale may form a sort of flattened horny mass resembling a brownish yellow wafer pasted on the skin: scratching easily detaches it in a single piece. But it is impossible by the stroke of a finger-nail to obtain the smooth and shiny surface with punctate hemorrhages of psoriasis. The lesions, of course, have at times a certain tendency to bleed from scratching. The eruption resembles in its *ensemble* an eruption of secondary syphilis without infiltration, or an abortive psoriasis guttata. It is more especially localized on the trunk and arms; the face and extremities are almost always free. It has a slow evolution and a great resistance to treatment.

SECOND VARIETY (INTERMEDIATE BETWEEN LICHEN AND PSORIASIS).

Parapsoriasis lichenoides: (It is probable that cases described under the name of *parakeratosis variegata* should be placed in this group; it is undoubtedly the *lichen variegatus* of Radcliffe Crocker.)

Parapsoriasis lichenoides manifests itself at the beginning by minute, brilliant, flattened papules the size of a pin-head and resembling imperfect lichen planus papules, except the color is much brighter. The lesions are sometimes depressed and have an atrophic appearance. Occasionally they are more voluminous and slightly squamous, but they never reveal under a stroke of the finger-nail the characteristics of psoriasis. They are slightly or not at all pruriginous. There is a manifest tendency to form a sinuous and irregular network which incloses variously sized areas of normal or nearly normal skin.

In some cases there are formed irregular patches, more or less extensive, and such cases become the transitional forms towards the third variety. The coloration is variable, passing from a pale pink to wine-dregs or a bluish red according to the localization: consequently it gives to the skin a most variegated appearance. The lesions are almost limited to the trunk and arms, leaving the face almost entirely free. The same slow evolution and resistance to treatment is present.

THIRD VARIETY (CLOSELY ALLIED TO SEBORRHŒA PSORIASIFORMIS).

Parapsoriasis in patches: (These are our *érythrodermies pityriasiques en plaques disséminées*, the same as described by J. C. White and C. J. White.)

Parapsoriasis in patches is characterized objectively by circum-

scribed, sharply defined patches from 2 to 6 cm. in diameter. They are scattered irregularly over the tegument without any apparent system. The eruption varies in color from a pale red to a brownish or livid red according to the part affected. There is always present a fine pityriasic desquamation more or less marked in different cases. It never reveals under the nail stroke any of the characteristics of psoriasis. There are at times, in some of these cases, aggregations of small flattened papules which may be considered as links connecting it with the second variety. There is no infiltration of the tegument appreciable to the eye or touch. The face is rarely affected and there is the same extremely slow evolution, great resistance to local treatment, and few or no subjective symptoms.

Etiology and Pathology: We know nothing very definite about the etiology or pathology of these affections. They do not appear to be either contagious or epidemic. They may appear at any age: nevertheless, they seem more frequent in youths and adults. I have observed cases in men and women, and in all classes of society. They seem to be slightly more frequent in women than in men.

THE POSITION OCCUPIED BY PARAPSORIASIS IN DERMATOLOGICAL CLASSIFICATION.

The relation of parapsoriasis to its neighboring morbid types. Parapsoriasis guttata has the closest affinities with psoriasis; there are facts which would seem to establish a gradual transition between it and psoriasis with small lesions. It differs from psoriasis punctata and guttata, however, by the absence of the characteristic scale; by the impossibility of producing by scratching the smooth, red, shiny, surface on which appear the pathognomonic minute, scattered, hemorrhagic points; by the less visible elevations of the lesions, (explainable by the slight infiltration of the papillary body), by its evolution, and by its histology.

There is also some resemblance to seborrhœa psoriasiformis; but in the latter there is almost never the regularly circumscribed appearance of the patches, and the scales are totally different in parapsoriasis guttata.

The resemblance to the eruptions of secondary syphilis is quite marked, indeed, it is often mistaken for syphilis and treated as such; but in reality it has not the character of a syphilide. It presents but little or no infiltration of the tegument; there is no peripheral epidermic collarette; it differs totally in its histology from the lesions of secondary syphilis.

Its place in the nosological chart is beside that of psoriasis guttata—a little further off from true psoriasis than seborrhœa psoriasiformis.

Parapsoriasis lichenoides has close objective affinities with lichen planus. Its elementary lesion resembles to a certain degree the elementary papule of lichen; it differs, however, by the smaller amount of infiltration of the papillary body; by the absence of any tendency towards detachment of the epidermis; by a more or less marked acanthosis; by the lack of any neoplasic appearance in the elementary lesions, by the total absence of umbilication; by the different grouping of lesions from that of lichen; and finally by almost complete absence of pruritus.

When the lesions are well developed and the patches have spread to their maximum size, there may be some resemblance to pityriasis rubra; it differs, however, in that the eruption does not ordinarily generalize over the entire body; that the desquamation is much less abundant; that it makes its appearance by papules and is not pruriginous.

It may simulate the early forms of mycosis fungoides, from which it differs by the absence of infiltration, the absence of pruritus, and by its histological features.

The affinities of parapsoriasis lichenoides with psoriasis and with seborrhœa are much less than that of parapsoriasis guttata and parapsoriasis in patches with those two groups of affections.

Parapsoriasis in patches has, however, the closest affinities with psoriasis and especially with the seborrhoic group. It is often extremely difficult to classify those numerous intermediate cases which exist between the pityriasic seborrhœas of the body, the psoriasiform seborrhœas with dry, slightly infiltrated lesions, uncomplicated with eczema: and the parapsoriasis in patches. All that can be affirmed is, that the parapsoriasis in patches have ordinarily less dermic infiltration, little or no acanthosis, slight parakeratosis; that they are dry, less scaly, and never become eczematous; that they almost never invade the face nor the flexor surfaces of the joints; that the lesions give almost no functional trouble, since if there is any pruritus, which is relatively rare, it never acquires a sufficient intensity to become a morbid element; finally, its evolution is much slower, more progressive than that of seborrhœa and its resistance to local medication is infinitely greater—all these distinctive features do not permit us to fix them definitely in the overcharged and vaguely limited group of seborrhœas, but it must be recognized, that these two morbid types have the

closest relationship, and that parapsoriasis in patches, at least from the clinical point of view, seems to be a simple appendix to the seborrhœas. Furthermore, are not the seborrhœas worthy of the name of parapsoriasis?

Without having so close an affinity, nevertheless, parapsoriasis in patches has many points of resemblance to psoriasis. There is the same indolence, dryness, and nearly the same redness of the lesions. But it differs totally from a histological point of view; the papillary infiltration is much less; there is less acanthosis, and less parakeratosis. Objectively, there is no thickening of the skin; the redness is less pronounced, the furfuraceous scales are more minute, less abundant and may even be wanting: one never finds the hemorrhagic points beneath the scale removed by the nail stroke, so typical of psoriasis.

It is not necessary to insist upon the points of resemblance between parapsoriasis in patches and mild cases of pityriasis rubra, because it would only be necessary to repeat what I have said in regard to parapsoriasis lichenoides: but I wish to emphasize the objective relations which exist between certain forms of mycosis fungoides at the commencement, and parapsoriasis in patches. I cannot repeat too often; that in *every case presenting an eruption analogous in appearance to parapsoriasis in patches, with an infiltration of the derma in some of the patches, and especially in every case in which there is the accompaniment of intense and persistent itching; a beginning mycosis fungoides must be suspected.* Under such circumstances it is advisable not to make a positive diagnosis until an histological examination has been made.

It is then quite evident that the group of parapsoriasis, such as I define it, has a considerable theoretical value in this, that it establishes bonds of union between psoriasis and seborrhœa psoriasiformis on one side, and between lichen planus and the mild forms of pityriasis rubra and mycosis fungoides on the other.

In the course of this synopsis of these affections the dominant characteristic has been the difficulty in causing them to disappear. As to internal treatment, I have seen nothing to equal the cacodylate of soda (which is often inert). As to local treatment I have had some benefit from the glycerites, especially the glycerite of starch with salicylic and tartaric acid. But the best results have undoubtedly been obtained with an ointment containing ten per cent. of pyrogallic acid to which was added two and one half per cent. of salicylic acid. It is necessary at times to push this combination to the limit of tolerance, care being taken to avoid general intoxication which may have

aggravating results. It is advisable then, to keep the patient under the closest surveillance.

REFERENCES.

[1] Unna, Santi and Pollitzer, *Ueber die Parakeratosen im allgemeinen und eine neue Form derselben.* (Parakeratosis Variegata.) Monatsh. für prakt. Derm., 1890, Vol. X, Nos. 9 and 10.

[2] Jadassohn, *Ueber ein eigenartiges psoriasiformis und lichenoïdes Exanthem.* Verhandlung der LV Deutsche Derm. Kongress, 1894, p. 524.

[3] Jadassohn, *Beitrage zur Kenntniss des Lichen, nebst einigen Bemerkungen zur Arsentherapie.* Chap. II. *Dermatitis psoriasiformis nodularis (Pityriasis chronica lichenoïdes)* Festschrift zu Ehren von Moritz Kaposi, Wien, 1900.

[4] Neisser, *Zur Frage der lichenoiden Eruption mit Krankendemonstration,* Verhandlung des LV Deutsche Dermat. Congress in Breslau, 1894.

[5] Fritz Juliusberg, *Ueber einen Fall von psoriasiformen und lichenoiden Exanthem,* Archiv. f. Dermat. u. Syph., 1897, XLI, p. 256.

[6] Fritz Juliusberg, *Ueber die Pityriasis lichenoides chronica (psoriasiform lichenoides Exanthem),* Archiv. f. Dermat. und Syph., 1899, L, p. 350.

[7] Radcliffe-Crocker, *lichen planus,* Brit. Jour. Derm., 1900, p. 433. Radcliffe-Crocker, Colcott Fox, Dermat. Soc., London, Dec. 12, 1900, Jan. 9, '01. MacLeod, Dermat. Soc., London, Jan. 9, 1901.

[8] T. Colcott Fox, and J. M. H. MacLeod, *On a case of Parakeratosis variegata.* Brit. Jour. Dermat., Sept., 1900, p. 319.

[9] V. Casoli, *Dermatosi squamose anormale,* Giornale Italiano delle malattie ven. e. della pelle, 1901, p. 719, 742 and 749.

NOTICE.

The consolidation of the *New York Medical Journal* and the *Philadelphia Medical Journal* was most fitting and in perfect harmony with the high ideals and methods of which they were both such able exponents. We congratulate the readers on the concentration of resources, which cannot help but furnish them the "cream" of medical thought, and we congratulate the united journals in having as editor such a Nestor of medical journalism as Dr. Frank P. Foster.—A. D. M.

NEW YORK DERMATOLOGICAL SOCIETY.

312th Regular Meeting, March 24, 1903.

HENRY H. WHITEHOUSE, M.D., Chairman pro tem.

(Continued from page 286.)

Sycosis Treated by the X-Ray. A case presented by Dr. Fox.

This case showed the effect of the X-ray in the treatment of a sycosis as compared with the use of albargin ointment. The X-ray had produced a marked inflammation of one side, while the other side, treated with the ointment, showed a notable improvement.

Dr. GEORGE T. JACKSON said that there could be no question about the albargin ointment being better than the X-ray in this case. It seemed to him that this patient had been treated rather too vigorously by the X-rays. As he understood it, in treating sycosis, the object was not to cause a dermatitis, but a falling out of the hair without any reaction.

Dr. PIFFARD, speaking of the case of lupus, said that the Finsen light employed the rays from blue, indigo, violet and ultra-violet. The latter were in comparatively small proportion in the Finsen light and its modifications, i. e., where the light came from a carbon low-tension arc. On the other hand, if iron terminals were used for the arc there would be a larger proportion of ultra-violet rays. With the condenser spark there would be a very small amount of luminous rays and a very large proportion of ultra-violet rays. The apparatus used for the treatment of the case under discussion was a modification of the Finsen lamp, and was probably not as efficient as Finsen's own apparatus. Some of these lamps used glass lenses, though none of these would allow any efficient ultra-violet rays to pass. These rays would pass through an inch of rock salt, but this substance was opaque to the X-ray. If Willemite were exposed to the condenser spark there would be a brilliant fluorescence; if it were exposed to the ordinary low tension arc light, there would be a moderate fluorescence. If it were exposed to the condenser spark and then a disc of quartz were interposed there would be no appreciable diminution of the fluorescence, though the latter would disappear instantly on interposing a spectacle lens. With the low-tension arc good fluorescence would be obtained even on interposing glass. This showed that the fluorescence was not due here to the ultra-violet radiations, but to the luminous rays. This fact had led to considerable confusion in testing lights for ultra-violet rays.

Dr. FOX said he had shown the case of lupus of the nose as a commentary upon the tendency of the profession at large to run after something new in treatment which might take twice as long and give the patient much more pain than old and well-established methods. The use of the dental burr was certainly painful, but this patient had suffered more from the inflammation produced by the X-ray treatment, and yet it was generally claimed that the X-ray treatment was painless.

A Case of "Scrotal" Tongue with "Wandering Rash." Presented by Dr. A. D. Mewborn.

The patient, W. R., aged 21 years, was a native of Germany, occupation that of waiter. His father had died at the age of 41 from "*Magenschluss.*" His mother was living and in good health. Four brothers and one sister showed no hereditary stigmata of disease. The patient is of robust health, giving no venereal history except that of gonorrhœa, contracted two years ago, which lasted eight months. When first seen, on June 28, 1902, he was alarmed at the appearance of *herpes progenitalis* and circinate patches on the tongue which he considered specific. He claimed that the furrowed and fissured appearance of his tongue was congenital, but that he had never noticed these patches of exfoliation with the circinate whitish margins before the appearance of the small ulcers on the penis. There was nothing in the history or appearance of the herpetic ulcers to suggest syphilis. At the present time the tongue presents a deeply fissured appearance, giving its striking resemblance to the scrotum. Around the lateral margins, and especially near the tip, are patches denuded of papillæ, but not ulcerated, which have slightly raised whitish margins. These patches seemed to start in the furrows and spread peripherally over the ridges. There were no subjective symptoms.

Dr. Piffard remarked that the appearance of this man's tongue strongly suggested syphilis. There was also leukoplakia present.

Dr. Johnston thought the condition was quite similar to that found very often on mucous surfaces; a superficial erosion accompanied later by papillary outgrowths. This man's tongue did not look to him like the ordinary geographical tongue seen in syphilis. Leukoplakia was well known to occur outside the syphilis-tobacco combinations.

Dr. Fordyce said he understood this was a congenital fissuring of the tongue.

Dr. E. L. Keyes said he had seen a number of similar cases in which the condition was congenital. The appearances did not suggest syphilis to him at all.

Dr. Mewborn exhibited a water-color drawing of the tongue of the patient shown at the January meeting. The case under discussion gave a history of congenital fissuring. The development of the circinate patches occurred only nine months ago.

A Case of Large Epithelioma of Forehead. Presented by Dr. C. T. Dade.

The patient was a man who, six years ago, developed a large lesion on the right side of the forehead, which for a number of years was considered to be leprosy. Two years ago the case was thoroughly curetted and nitrate of silver applied, and the patient was now presented, after the

lapse of two years, to show the result. A photograph was presented showing the appearance of the patient at the time of this treatment.

Dr. Bronson thought the method of treatment employed, though old, was an excellent one.

Dr. Fordyce said there was a vast difference in the malignancy of these epitheliomata of the face; some could be cured easily, others only by the most heroic methods. Personally, he had never had good results from nitrate of silver, and he was inclined to favor the stronger applications, such as chloride of zinc or arsenic.

Dr. J. M. Winfield said that the presentation of the case at this time was very opportune, because it might aid in preventing the wholesale use of the X-ray on those simple epitheliomata; he said that it was more than foolish to try to cure a small operable epithelioma with the X-ray, when so many quicker methods were at our command. He thought it was our duty to discourage the unqualified use of the ray.

Dr. Keyes complimented Dr. Dade on the admirable result he had obtained.

Dr. Sherwell said he was accustomed to use the acid nitrate of mercury in these cases. His rule was to use the curette until there were no soft spots left, thereafter applying the escharotic. Very many of the cases had been cured.

Dr. Fox said that his experience with epitheliomata and patches of lupus on the cheek showed that the curette was useful in removing the mass of the tissue, but no one, in his opinion, could remove all of the diseased cells, even with the finest curette. A sharp stick of nitrate of silver might set up enough inflammation, but he preferred the use of the dental burr, which would follow the disease deep into the skin.

Dr. Robinson remarked that it was utterly impossible, in his opinion, to remove all of the pathological epithelial cells either by the curette or the burr.

A Case for Diagnosis. Presented by Dr. J. A. Fordyce.

The patient was a woman of thirty, who had been married for some years, but had not recently lived with her husband. The present eruption had first appeared on the arms about one year ago. It consisted of sharply marginate patches somewhat resembling erythema multiforme; grouped papillary lesions and scattered papules. On the palm the lesions were pigmented and scaly, in which location they suggested syphilitic efflorescences. On the neck several marginate patches were present, the color of which disappeared almost entirely under pressure.

Dr. Jackson looked upon the case as one of syphilis.

Dr. S. Lustgarten was of the opinion that it was a late form of papular syphilide, what the French called tertiary papules.

Dr. Bronson thought some of the lesions in the palms were charac-

teristic of syphilis, but there was an erythema that did not look like any syphiloderm at that stage with which he was familiar.

Dr. Fox looked upon the case as a superficial serpiginous tubercular syphilide.

Dr. Klotz looked upon it as non-syphilitic, but as an erythema. He would surely expect to find some trace of cicatrization in a syphilitic process of so long duration.

Drs. Keyes and Morrow also thought it a syphilide.

Dr. Whitehouse, while taking the same view, was not disposed to think it was a very late syphilide. The lesions on the palm were perfectly characteristic, as were the circinate patches on the forearm. The erythema he could not explain.

A Case of Psoriasis of Nose Simulating Erythematous Lupus. Presented by Dr. A. R. Robinson.

The patient was a woman with a lesion on the nose resembling an erythematous lupus, but really a seborrhoic form of psoriasis.

Dr. Fordyce said it was undoubtedly a case of psoriasis. He saw many cases of seborrhoic dermatitis which were absolutely indistinguishable from psoriasis. He was becoming more and more convinced that they were closely allied conditions.

A Case of Mycosis Fungoides. Presented by Dr. Fox.

Mrs. Anna S., aged 38. The disease began ten months ago. Her general health is good. She has gained fifteen pounds in weight during the past two months. She gives no history of any previous skin trouble. On the neck are scars from old strumous abscesses. The eruption is located on the trunk and extremities, the face being free. There is an eczematoid patch on the left ankle, which is swollen. The eruption consists of papules and circinate discs with scaly borders and comparatively smooth centers. The recent lesions are of a bright yellowish red color; the older ones are of a dull brownish red. Several of the rings of the size of a fifty-cent piece enclose a central nodule like a bull's-eye, the borders being formed of a number of slightly scaly nodules. There is considerable infiltration of a number of the patches, but no tumors of any size. The eczematoid patch on left leg is painful and leaves a yellowish stain when pressed on. On the back are many dull red papules in corymbiform clusters.

The eruption is quite pruritic, but is not excoriated.

Dr. Mewborn said that some of the lesions looked to him like those of lepra.

Dr. Keyes said that some of the lesions resembled those of syphilis, and he would not be willing to make a diagnosis without further study.

Dr. Lustgarten said he was not prepared to accept the diagnosis of mycosis fungoides after such a cursory examination.

Dr. Fox replied that the case had been under observation only a short time, but he felt quite positive as to the diagnosis. He would put the patient upon strong antisyphilitic treatment to observe the effect, and hoped to be able to show her again.

Scar Keloid Treated by the X-Ray. Case presented by Dr. Fox.

The patient was a colored man with a scar keloid undergoing X-ray treatment on one side. The case was presented at this early stage to afford an opportunity to note the effect of the treatment.

Dr. Winfield said that there did not seem to be any occasion for so much burning. He had had a similar case under X-ray treatment for some months, and the keloid was getting smaller without any burning.

Dr. Sherwell asked if any one had seen a keloid below the knee. He had never seen one in that situation, though he saw no reason why they should not occur in that locality. He thought this curious fact deserved mention, and, if possible, explanation.

Dr. Morrow said he had seen one case in which there were numerous keloidal growths, and some of them were below the knee; indeed, they were almost universal.

Dr. Fox said that in one celebrated case in Philadelphia, known to all dermatologists, they extended below the knee.

Epidemic of Ringworm Contracted from Cats.

Dr. A. D. Mewborn presented a number of cultures taken from six children affected with ringworm. All of these children lived in the same tenement-house on the "East-side." On the fifth floor in one apartment were two sisters affected. Case I., Ida R., aged 4 years, had two typical patches of the small-spored variety on the scalp and patches on the forehead and left eyelid. These latter were red and scaly, with a flat elevated center, surrounded by a slightly depressed area and a slightly elevated border separating it from the normal skin. The sister (Case II.), one year old, presented a patch on the left eyelid and eyebrow identical in appearance with the above. In this family was a maltese cat affected with patches of ringworm on the ears and tip of nose. A microscopical examination, made later, showed the same mosaic of spores in the hairs taken from the cat as was found in the hairs of the older girl. Across the hall, in another apartment, Case III., Louis S., aged 6 years, had two large patches of small-spored ringworm of the scalp and a patch under the chin. Louis had a maltese kitten severely affected with ringworm on the face and ears. On the fourth floor two more cases were found in different families. Case IV., Sarah R., aged six years, had a patch on the neck and one on the inner side of the thigh. Case V. was in an infant aged nine

months, who had a patch on the scalp an inch in diameter. This patch on the downy scalp of an infant presented the same clinical appearance as those on the glabrous skin of the first four cases and described under Case I. Case VI., Sadie H., aged 11 years, had a patch on the neck which was nearly well under applications of iodine. It was impossible to ascertain the full extent of the epidemic as many of the children were at school. Some of the twenty or more families living in the house refused permission to examine, but it was claimed that there had been other cases. Cultures made on glucose-agar and on beerwort-agar from cases 1, 2, 3 and 4, as well as from the two cats, gave almost identical growths, i. e., very rapid, downy growths, with straw colored rings and a fringe. Hairs taken from cases 1 and 3 and kept in a moist Petri-dish between slide and cover glass (Plaut method, vide Monatshft. f. prakt. Dermat., 1903, XXXVI., 109), as well as hairs taken from the two cats showed the same reproduction forms by chlamydospores. All of these facts seemed to the speaker to point to the cats as source of infection. Cases V. and VI. refused to allow specimens to be taken, but clinically they were identical with the other four cases. Several stained and unstained preparations of the Plaut method of cultivating these fungi were shown the society.

NEW YORK DERMATOLOGICAL SOCIETY.

313th Regular Meeting, April 28, 1903.

Oscar H. Holder, M.D., President.

A Case of Folliclis. Presented by Dr. E. B. Bronson.

Patient W. S., a young woman, 18 years old, states that the disease dates from vaccination, when she was 4 or 5 years of age. The arm was much inflamed and swollen. Following shortly after the vaccination came what the mother called chicken pox, that lasted for two or three months. Since then she has never been free from lesions such as she has at present. The trouble has always been worse in winter. At times on the legs there were larger lesions and something the doctors called gangrene. At present there are on the legs a number of small pin-head sized papules, some scabbed, some few ulcerated. One the size of a large pin-head shows a crater-like defect in the skin, with grayish base, and was covered with a scab. On the forehead is a large pea-sized nodule, scabbed over, and beneath the scab is a deep ulcer discharging pus. Several pin-head sized red papules scattered over the hands, some of them with a minute scab on top, which being removed shows a deep little ulcer. Small bald spots appear on the scalp with scars from old sores, and here and there a papule, occasionally an ulcerating one. Some also back of the ears. The little

scars on the head and extremities were the sites of former lesions. Behind and below the angle of the jaw on the right side is a large packet of hypertrophied glands.

Dr. J. A. Fordyce said that the case was similar to others that had been presented before the society. It was, in his opinion, closely allied to the group of eruptions described by French writers as tuberculides.

Dr. H. G. Klotz suggested that the administration of creosote internally would be appropriate treatment in such a case.

Dr. Bronson said he had presented the case as folliclis, because this was the designation first applied to the disease. It was certainly a very poor and unmeaning term; moreover, it implied that the disease had something to do with the follicle, which was not true. According to some authorities it began in the veins as a result of an inflammation of the wall of the vein set up by some toxæmia. The treatment had been cod-liver oil internally and antiseptics locally. The effect of the latter had been more marked in this case than in the other one he had presented. The latter occurred in a young man. The disease in that case had responded very well to exposures to the X-ray. It had acted better than the high frequency unipolar spark.

A Case of Gummatous Tuberculous Lymphangitis of the Arm. Presented by Dr. C. T. Dade.

The patient, an Italian laborer, aged 26, has been in this country about a year. Shortly after starting work here as a street cleaner a "sore" developed over the right index knuckle, which now presents a typical picture of tuberculosis verrucosa cutis. The patient presents now a series of nodules following in direct line, more or less, the lymphatic drainage from the original lesion to the axilla, where may be seen a broken down lymphatic gland. The series of lesions extending from the knuckle to the axilla have existed for the past nine months, and present exulcerated, indolent nodules, and at one place, high up, is a linear half-healed lesion, where a sinus had been opened up between two of the nodules. The lesions vary in size from a large marble to a horse chestnut, and are well above the surface of the skin. In a section from one of the higher nodules, giant cells and tubercle bacilli were found. The arm presents an almost identical picture with a similar case reported by Thibierge in the French Atlas of skin diseases. In his case the lymphangitis was secondary to tuberculous dactylitis.

Dr. J. M. Winfield said that it resembled a case he had seen about two years and a half ago in a washerwoman. The first lesions being upon the wrist and thumb in the form of warty growths. He had treated these by curetting and various other measures, but they had persistently returned. Finally, last spring, he used the X-ray, and after two applications it entirely disappeared and had not since returned.

Dr. S. Sherwell accepted the diagnosis. He said that he had at present under his care a case occurring on the hand of a washerwoman. He had treated it by the curette and acid nitrate of mercury.

Dr. Fordyce accepted the diagnosis.

Dr. Klotz said that the appearance presented showed that the disease spread through the lymphatics and blood vessels, and as syphilis was apt to do this he did not feel that the latter disease had been satisfactorily excluded.

Dr. Bronson said this case reminded him of an extraordinary one he had seen some years ago. The patient was a man about 36 years of age—an alcoholic. The disease began as an abscess on the anterior part of the lower third of the leg. It was incised. A few days later the probe showed a sinus running upward. This was slit up. In the next few days there was a further extension upward. The same process continued for two or three weeks, the sinus continually extending in a straight line upward and outward, beneath the skin, till little by little the skin had been slit up for a distance of about eight inches, and as far as the outer side of the knee. A bacteriological examination proved negative.

Dr. C. T. Dade said that the case had been sent to him for diagnosis, and he had felt reasonably sure that it was one of tuberculosis. Sections had been made of it, and giant cells had been found, but the tissue was under a more careful study for tubercle bacilli.

A Case of Lupus Vulgaris in Anal Region. Presented by Dr. J. A. Fordyce.

The patient was a boy, aged 8 years, who was born in this country of Swiss parents. He was well nourished and apparently in good health. He had a sharply defined patch of lupus about the size of a silver half-dollar not far from the anal opening, but separated from the orifice by healthy skin. No history of local abscess or intestinal tuberculosis. Was apparently external infection.

Dr. Klotz suggested that infection in this peculiar region might easily arise from the child's creeping around on the floor. This was more probable than infection derived from the water closet. He had seen a similar case some years ago.

Dr. George Thomas Jackson said he had seen an exactly similar case some years ago in the Randall's Island Hospital, the lesion being on the buttock. The child had probably become infected while creeping on the floor.

Dr. Sherwell recalled such a case seen by him in an adult before the time of X-ray treatment, and thought both that and this were just such cases as were particularly suitable for the treatment.

Dr. Fordyce said that in such limited patches of lupus he strongly advocated the use of the curette, followed by the Paquelin cautery. In

this way a cure could readily be effected without the prolonged treatment which the light method required.

Case of Pityriasis Rubra Pilaris. Presented by Dr. Fordyce.

The patient was a colored boy, seven years old. His mother stated that his skin trouble had existed two years and had followed a fall on the head. The skin over almost the entire body and head was slightly thickened and covered with fine scales. The follicular papules with their central horny plugs, were seen over the phalanges and in other parts of the body.

The palms and soles were the seat of a pronounced hyperkeratosis, and the nails were altered. The case was not a typical one, and presented certain features of both pityriasis rubra pilaris and dermatitis exfoliativa. The eruption had at no time been moist, and little itching was present.

Dr. G. H. Fox said that on the hands and face the lesions were like those of pityriasis rubra pilaris, but the scaling of the skin was entirely different, presenting more the appearance of a dermatitis exfoliativa. He would hesitate to make a positive diagnosis from such a hasty examination.

Dr. Sherwell said that he was inclined to accept the diagnosis of pityriasis rubra pilaris on account of the characteristic implication of the dorsal surfaces of the fingers. The scaling in general was of an entirely different type and not typical. In spite of this he was disposed to look upon the case as pityriasis rubra pilaris of a very aggravated type.

Dr. Winfield said that Dr. Whitehouse had shown the society some years ago a boy presenting the typical appearance of pityriasis rubra pilaris. Afterward the boy had come under the speaker's care, and at that time there was much more desquamation than in the case now under discussion. Subsequently he had passed through all of the successive stages of pityriasis.

Dr. Bronson said he was not willing to make a positive diagnosis of pityriasis rubra pilaris, for the reasons already given. The hyperæmia was more marked than in that disease, and the desquamation was very different from anything that he had seen in pityriasis rubra pilaris. If the latter were the correct diagnosis, then it was certainly complicated with dermatitis exfoliativa. He was inclined to attach importance to the mother's statement that it had been caused by a fall on the head, because such an accident, by affecting the sympathetic, might produce vaso-motor disturbance throughout the body.

Dr. Klotz said he agreed with the diagnosis, and thought the differences in the scaling might be explained by the patient's youth. It did not seem to him to closely correspond to the scaling of dermatitis exfoliativa.

Dr. Jackson thought the case looked very much more like one of dermatitis exfoliativa than pityriasis rubra pilaris. The color of the skin of the negro always somewhat confused our mental picture of a dermatosis.

Dr. A. D. Mewborn thought that there were a number of features in the case which pointed to the diagnosis of pityriasis rubra pilaris of Devergie. The marked hypertrophy of the nails with masses of thickened horny layers underneath their distal extremities; the excessive thickening and contraction of the skin in the palms and on the soles of the feet; the marked perifollicular hyperkeratosis on the dorsal surface of the first joints of the fingers and on the dorsal surface of the hands; the horny projections at the mouths of the hair follicles, especially noticeable on the thighs and legs; the accentuation of the natural folds of the skin with the fine desquamation on the buttocks; the mass of scales in the scalp, and the tense contracted appearance of the face with some ectropion, all seemed to confirm the diagnosis. He admitted that it was very extensive and bore some resemblance to an exfoliative dermatitis, but there was no sensitiveness to changes in temperature as would be expected in that case.

Dr. Bronson felt very sure if this case had been presented some years ago it would have been considered as on the border line between pityriasis rubra of Hebra and dermatitis exfoliativa.

Dr. Fordyce said that the features enumerated by Dr. Mewborn were certainly in favor of pityriasis rubra pilaris, but the fact that it was universal and that there were no sharply marginated patches, was against this diagnosis. In dermatitis exfoliativa it was not usual to find such marked hyperkeratosis in the palms. He would favor the diagnosis of pityriasis rubra pilaris, though looking upon the diagnosis as somewhat doubtful.

A Case of Bullous Dermatitis Medicamentosa from Iodipin. Presented by Dr. Klotz.

The patient, John G., 58 years of age, was admitted to the eye service of Dr. E. Fridenberg at the German Hospital on March 27, 1903, on account of detachment of upper part of retina, with cloudiness of media and opacities of cornea. Although there was no history of previous syphilis nor any definite signs of this disease present he was put on iodide of potassium on March 30; the dose of ten grains three times a day to be increased by two grains each day. There was considerable improvement in vision, but on April 10, he began to complain of coryza and sore throat; the tonsils were congested and covered with a membrane, cultures showed the presence of strepto- and staphylococci. (T. 102-8.) There existed then a number of papules and papulopustules on the forehead, cheeks, chest and back, not exceeding the usual conditions of an arm from iodine eruption. On the discontinuance of the iodide of potassium this eruption rapidly healed and the tonsillitis subsided. Hoping that another preparation of iodide would be better tolerated, on April 16, the patient was ordered to be given iodipin 10 per cent., one drachm three times a day. After eight doses of the drug, on April 19, a severe eruption suddenly developed covering the

forehead, face, chest, back, armpits, groins and thighs, of which some distinct remnants are still to be seen on the neck and upper part of the back and groins. The lesions are stated to have appeared as flat papules, but within a few hours developed into large bullæ, the contents of which soon became purulent. The temperature rose to 104 degrees F., the axillary and inguinal glands were slightly enlarged and tender. The tonsils and pharynx showed only slight congestion; in the urine the presence of iodine was easily shown.

After the iodipin was discontinued the temperature fell to normal, the eruption did not spread and soon began to heal, the pustules and bullæ forming more or less thick scales and crusts. The patient was seen on April 23, when the bullous and pustular character of the lesions could distinctly be seen. They varied in size from a pea to a cherry, some were of a dark bluish red color and more or less denuded of the upper layers of the epidermis. These photographs, for which, as well as for the history of the case, I am indebted to Dr. Stetten of the house staff, shows better than the present condition the extent of the eruption. Moist applications of bichloride of mercury (1 to 1,000) have been the principal treatment.

Dr. Fordyce said that this was the first case reported, to his knowledge, of an eruption following the use of iodipin. The lesions were like those which followed the other iodine preparations.

BOSTON DERMATOLOGICAL CLUB.

The Regular Monthly Meeting Was Held on the 31st day of March.

Dr. J. T. Bowen, in the chair.

A Case of Syphilis and Eczema Seborrhoicum.

Dr. C. J. White showed a young man, æt. 30, a dentist by profession, who had had for some years seborrhœa of the scalp and acne papules on the back. He said that in January of this year he had suffered from an attack of gonorrhœa; that on February 8th he had consulted a doctor for a sore upon the penis, which had been called an infected herpes and had healed under a simple dusting powder of oxide of zinc and calomel; that between the eighth and the twentieth of February he had had "the grippe" (?); and that on March 16th the present eruption had broken out over the body.

To-day, March 31st, the following puzzling lesions were present: Throughout the scalp a slight seborrhœa which the patient said had been much more intense but had cleared up under the influence of a wash of resorcin, rose water and alcohol. On the face a few large areas of dull red macules on a greasy seborrhoic skin. On the back many dull red,

rather oily papules and scattered among them larger macules, slightly brighter in color, and surmounted by an indefinite, greasy, yellow scale. On the chest over the sternum a rectangular plaque, two inches by three, covered with adherent, dry, fine brown scales. Over the pectorals and scattered over the sides of the chest and abdomen were greasy, scaling, dull red maculo-papules, which did not bleed when scratched. The pharynx was uniformly congested and felt uncomfortable, and there were enlarged glands in the neck, elbow and groin.

Dr. Howe did not want to make a positive diagnosis without seeing the patient by daylight. He felt sure, however, that the man had eczema seborrhoicum and suspected also the presence of syphilis.

Dr. James C. White concurred in the diagnosis of seborrhoic eczema, and said that some of the lesions were unquestionably those of syphilis.

Dr. Post said that most of the lesions, except the plaque on the sternum, might well be syphilis, but he would consider it very difficult to select each lesion and to say definitely whether it was syphilis or eczema seborrhoicum.

Dr. Harding thought there was a distinct seborrhoic element in the case, and that there was a faint, underlying syphilitic eruption also, but he did not want to commit himself to a positive diagnosis from this examination by artificial light.

Dr. Bowen did not regard the majority of the lesions as those of syphilis. He did not feel sure that psoriasis was not present and said that the difference between psoriasis and eczema seborrhoicum was not always plain to his mind.

Dr. C. J. White said that he had brought the case to the meeting not so much for a diagnosis, for he felt sure that the man had both eczema seborrhoicum and syphilis, but because he thought it would be an interesting study to select certain lesions and ask the members whether they were one disease or the other. To his mind such a differential diagnosis was impossible in this particular instance.

A Case of Multiple Angioma.

Dr. Post showed a most remarkable example of this affection in a young girl, but as the case is to be reported in full at the meeting of the American Dermatological Association in Washington further comment is unnecessary.

A Case of Cheiro-Pompholix (?).

Dr. Bowen brought forward again this case which Dr. J. C. White had shown at the January meeting of the Club (vide Jour. Cut. Dis., April, 1903, p. 182.) Since the last meeting the bullæ had extended to the forearm, legs, and buttocks, accompanied by a slight rise of temperature and considerable malaise so that the patient had been confined to his bed for a few days. The lesions on the buttocks were small

vesicles which dried up leaving a crust under which pus developed. They were distinctly slow in healing. The eruption had now nearly disappeared, leaving pigmentation and only a few vesicles upon the fingers. At the time of confinement to bed the eyes had become sensitive and the patient had had to give up reading and on examination the oculist had discovered hæmorrhages into the retina and the choroid of the right eye.

Dr. C. J. White said that on account of the developments subsequent to the January meeting he was less inclined to make the diagnosis of cheiro-pompholix. He had asked the patient if he had had a wound on his fingers before the eruption appeared, thinking, perhaps, that this was a case of pemphigus traumaticus, but the patient denied any such occurrence. Dr. White was not ready to make the diagnosis of dermatitis herpetiformis on account of the many recurrent attacks, always with the advent of warm weather, and also on account of the persistent inclination of the early lesions to appear between the fingers.

Dr. Bowen said that the extension of this eruption and the other symptoms made the diagnosis of cheiro-pompholix now less probable. Whether there was any connection between the cutaneous affection and, the trouble in the eye was problematical.

With regard to cheiro-pompholix, the affection was a pretty indefinite one, writers differing very much as to what should be included under this term. In the present instance the possibility of a dermatitis herpetiformis should be entertained.

A Case of Pityriasis Rosea and Eczema.

Dr. Howe presented a young woman who had had the present cutaneous affection for about two weeks.

Under the chin and on the sides of the neck were oozing, crusting, confluent lesions, sharply limited and pruritic. Over the trunk were scattered pinkish macules which were covered with fine furfurations. On the back the lesions were closely aggregated, showing a definitely accentuated tendency to follow the lines of cleavage of the skin. They were very scaly and by artificial light glistened like the silvery scales often seen in psoriasis. There was no itching present on the trunk. When first seen by Dr. Howe, four days previous to the meeting, there were scaling lesions about the mouth and alæ of the nose, and the condition about the neck and chin was also scaly. The patient stated that since then she had made no applications to the skin and had taken no medicines during the last few weeks. She was also positive that no one spot had appeared on the body any appreciable time before the general eruption occurred.

Dr. Harding said that some of the lesions strongly suggested pityriasis rosea, others psoriasis, while there was a general appearance about the eruption which made him think of syphilis. He, therefore, made the diagnosis of syphilis, but felt that some other condition was present also.

Dr. C. J. White wished to call the case pityriasis rosea plus an acute dermatitis of the neck.

Dr. James C. White said that the lesions of the neck looked very much like those of an artificial dermatitis and that they had probably no connection with those of the trunk. He formed the opinion that this was otherwise a case of pityriasis rosea, partly on account of the long, oval, slanting lesions on the sides of the chest and on the back, although some of the patches were covered with much thicker scales than are ordinarily observed in this disease.

Dr. Howe, in closing the discussion, remarked that when he first saw the lesions upon the face and neck they reminded him of the conditions one sees in the seborrhoeic type of syphilis, but on very careful inquiry and examination of the patient he had been unable to find any other suggestions of syphilis, and had come to the conclusion that the case was one of pityriasis rosea. Since the patient's first visit many of the lesions had become more annular and scaly and the case had become more puzzling.

Lupus Erythematosus of Rather Unusual Appearance and Verrucæ Planæ Juveniles.

Dr. Bowen showed a girl of sixteen, who had presented herself at the Massachusetts General Hospital ten months previously. At that time the affection was of doubtful nature, an eczema or psoriasis being suspected. The duration of the affection was somewhat uncertain, but it had probably existed for several months before she was first seen.

At the present time she presented eight or ten sharply bounded, annular and papular lesions covered with thin scales, situated about the eyes. There were several small lesions upon both the upper and the lower eyelids; those of the right lid being of an annular shape and made up of a number of small papular lesions. A lesion of the left upper lid has the form of the segment of a circle with very slight apparent atrophy of the center.

The lesions were of interest from their small size, location and their segmental form. The case was presented as one of lupus erythematosus of rather unusual appearance and also on account of the "flat warts" which were present in great number on the backs of the hands.

All the members present agreed with the diagnosis offered by the speaker.

A Case of Dysidrosis.

Dr. C. J. White presented a young woman, a Canadian by birth, and twenty-three years of age. She looks well and has a good digestion, but she says she feels "nervous" and becomes easily frightened. She grows

dizzy when out of doors and sleeps poorly, being troubled by dreams and by insomnia.

Her skin disease began seven years ago on her hands and has recurred each year with the advent of spring, and at times has appeared during the winter just before a menstrual period. If she receives no treatment the lesions spread to the hands and wrists, and are always more abundant on the left side. If she applies remedies to the surface and takes medicine inwardly the eruption and hyperidrosis improve immediately and can be kept in control throughout the summer. The truth of this statement can be partially vouched for, because the patient has been treated at the Massachusetts General Hospital during two separate years—1899 and 1902.

At present there is a marked hyperidrosis of the hands, while on the sides of the fingers there are rows of closely aggregated glistening, translucent "vesicles," while many of them seem to have a central depression which looks darker in color and more opaque. Most of these "vesicles" are small, but some reach the size of a small kernel of boiled sago.

Dr. James C. White referred to these lesions upon the fingers and wished to regard them as the vesicles of a recurrent eczema, as they seemed to him to be of inflammatory character and not the occluded and dilated orifices of sweat glands.

Dr. Harding considered the lesions to be due to hyperidrosis.

Leucoderma Syphiliticum?

Dr. Bowen showed a case of leucoderma of the neck in a young woman of twenty-one, presenting the network of melanoderma surrounding leucodermic, circinate areas characteristic of leucoderma syphiliticum. The patient was a brunette and claimed that she had not noticed the affection until about twelve weeks ago. The interesting point was the fact that there were no other signs of syphilis present, nor could any history of preceding lesions of any kind be obtained.

Dr. James C. White said that he would not make the diagnosis of syphilis on these pigment changes alone and that he had certainly observed them in women who had not had syphilis.

Dr. Post agreed with this statement, and said that if other symptoms of syphilis were present then it was proper to call such pigment spots leucoderma syphiliticum.

A Case for Diagnosis.

Dr. Howe showed a middle-aged man who gave no history of any previous illness. Both the upper and the lower lip were covered with a glistening brown, dry epidermis, which was cracked in places. Both lips were swollen, slightly everted and markedly indurated, the induration being almost cartilaginous to the touch and sharply circumscribed. At

the right angle of the lips, and half an inch from their borders was a raised, circumscribed papule, half an inch in length and an eighth of an inch in width. This papule had been present for four months and the condition of the lips for about five months.

Dr. James C. White wanted to know how much the man smoked and the patient replied that he did not smoke at present, although in the past he had used tobacco in pipes and in cigars. To Dr. White's query as to whether the man played upon any wind instruments the patient replied that he played the flute.

Dr. C. J. White remarked upon the thinness of the man's eyebrows, thinking, perhaps, that syphilis might be a factor in the case, but the man replied that he had always had such eyebrows.

Dr. Harding did not believe the induration could be due to eczema as he could feel individual hard nodules beneath the skin.

Dr. Howe also said that he could not regard the case as one of eczema.

As a result of these questions nobody present dared to offer any diagnosis.

A Case of Leukoplakia.

Dr. Post showed a middle aged man, the subject of syphilophobia, who had had the present conditions on his tongue for an indefinitely long time. The tongue was thick and hard and was cut up by deep irregular fissures. The tongue was not painful and was not affected by the presence of hot or cold substances.

Dr. Harding said that this condition could be non-syphilitic as well as the reverse, and was inclined toward the former view. Nevertheless, he had seen the warty condition, present at the base of this man's tongue, in cases of syphilis and had observed similar lesions disappear under anti-syphilitic treatment.

Dr. Post was inclined to regard this leukoplakia as syphilitic in origin, although he looked upon the case as very puzzling.

Chancre of the Eyelid.

Dr. Bowen brought forward a young man of twenty-one, a telephone operator, who presented on the right upper eyelid, a shallow ulcer, covered with a crust, with marked induration of the base and a moderate œdema of the surrounding tissue. The patient had first noticed a slight abrasion at this point three and a half weeks previously that had gradually been transferred into the present lesion. The pre-auricular and cervical glands on the corresponding side were moderately enlarged. There were no other signs upon the body. The patient could in no way account for the affection which could almost with certainty be classified as an initial syphilitic lesion.

All the members present agreed with this diagnosis.

Charles J. White, Secretary.

BOOK REVIEWS.

La Pratique Dermatologique. Tome III. Edited by Messrs. Besnier, Brocq and Jacquet. Paris: Masson et Cie., 120 Boul. St. Germain, 1902.

This volume, which is quite as magnificent as its predecessors, opens with a consideration of the subject of lepra by Jeanselme and Sée. Instead of beginning with clinical manifestations, the authors consider first the Hansen bacillus and the reactions it provokes; an admirable method when etiology is as clear as it is here. They hold that an early persistent coryza is as important a symptom as hemoptysis in the beginning of pulmonary tuberculosis, but claim that it is inconstant, and so deny the truth of Morrow's and Hansen's theory that this is the point of entrance of the organism. The usual note of caution is sounded as to possibility of cure, while a case is narrated in which the microscope showed complete disappearance of lesions. Visceral changes and their histology are fully given. The action, sometimes ameliorative, of serumtherapy is explained by the stimulating power of cytotoxins; not by any specific anti-bodies of lepra. This article is a fine example of the encyclopedic fashion in which many subjects are handled in this work. They will be invaluable for reference hereafter, but the excellence is by no means uniform.

Under the head of lichen, Brocq considers lichenification (which we in America regard as purely a consecutive lesion) and lichen planus. Lichen ruber acuminatus seems to be finally identified with pityriasis rubra pilaris, and Brocq considers Galloway's lichen circinatus as a disease unallied with this group. Its histology alone is enough to separate lichen from secondary lichenification, which is merely the response of the skin to continued irritation, and is very far from a specific process. Among the subvarieties are recognized a circinate type, formed of fused papules and a lichen acuminatus, which has been described as something outside of the Hebra-Kaposi disease just mentioned. Brocq does not commit himself on the latter point, and does not suggest that it is probably a developmental anomaly of the papule like the obtuse lesion. The article is clear and well considered; its illustrations of all sorts are particularly well done.

Lenglet has written a great monograph on lupus of both varieties. There is nowhere in the literature so full and at the same time so lucid a description of the histology of lupus vulgaris. A student would easily lose himself in the maze of the pages on treatment, but this book is not intended as food for babes, for which same the rest of us may be thankful. One naturally turns with interest to see what a Frenchman thinks of the etiology of erythematous lupus. Admitting rather more room for doubt than his confrères are in the habit of doing, he thinks we may consider erythematous lupus as "a lesion ordinarily, perhaps always, tuberculous," and "we may be permitted to hope that the proof of this nature will be furnished scientifically"—a beautiful belief, if you hold it with all your heart, as Kipling says. Naturally enough, treatment resolves itself into a list of measures, each with its advocate and each weighed and found wanting by the rest of the world.

Lymphadenie is the name given by Leredde to the skin affections associated with enlargement of lymph nodes. It is incomplete and makes no distinction between Hodgkins' lymphemia and myelemia.

Raynaud writes on mycetoma. He assumes that the disease is due to a single parasite presenting several varieties, and says that when the lesions are superficial, hot baths (45° C.) give good results. In his article on melanoderma Darier divides pigments into three varieties—hemosiderin; melanin, which we call hemofuchsin, and that of malaria, for which we generally use the term melanin. Why he omits hematin and hematoidin does not appear, since both occur in the

skin, but the consideration of their nature and origin is better done than usually in works on general pathology and is well worth reading. He then proceeds to a discussion of dyschromia in general, which he ranges in five classes, whose limits, as may be imagined, are artificial to a decree. For example: the pigmentations of syphilis and lepra are ranged with those of nervous origin, while bronzed diabetes is hematogenous. Darier evidently feels himself on far from solid ground, for his attitude is apologetic throughout; but he need have no fear. No one knows enough of the subject to controvert any statement he thinks justifiable.

Bodin sides with other observers in holding molluscum contagiosum as an epithelial degeneration, probably due to some external parasitic agent, at present unknown.

It is characteristic of this work that a disease so rare in the human subject as glanders should receive the exhaustive treatment Rist gives it. It will be invaluable for reference. Leredde gives a study of mycosis fungoides, which leaves us where other investigators have abandoned the work. It would be hard to say where a new line of research could begin, but there can be no question that the old ones have proved fruitless. Leredde thinks that the cellular infiltrate is lymphocytic and that the disease itself is a lymphoderma. In view of the evidence he brings, the idea that there are no internal metastases will have to be abandoned. His histological pictures invite criticism for they fail to represent the lesion.

Nævi form a chapter by Rist, who divides them into pigmentary, non-vascular and vascular. The consideration works out well on that basis, but he does not say, as he should, that in the second group the microscope is generally necessary for diagnosis. He errs, too, in stating that Unna was the first to claim the epithelial origin of the soft moles and that, except the "nævocarcinoma," there is no pigmented epithelioma. This may appear carping criticism, but it is very easy to perpetuate such mistakes. Barbe contributes four pages on rheumatismal nodosities.

Diseases of the nails fall to Dubreuilh's able handling. The fine pictures go far to prove what the reviewer has often said—that there are distinctive features in inflammatory affections of their beds. Darier's view of Paget's disease is that it is not an eczema, not an epithelioma and not connected with the duct-carcinoma of the breast when it occurs about the nipple, but that it is a "dyskeratolic degeneration of the epidermis," giving rise sooner or later to true epitheliomatosis. It must be very much later, for we have never seen the epithelioma in this country. After Dubreuilh's papillomata, usually much neglected, comes Déhu's alopecia areata, which illustrates that exasperating fault of systems—overlapping—but forgiveness comes easily, because after weighing the evidence the author decides that the parasitic theory is not admissible in the present state of science.

Brocq excludes a crowd of bullous affections from the pemphigus group, but retains the acute, febrile, the chronic, vegetating, foliaceous, and, still not content, adds epidemic, traumatic, hysteric, and, worst of all, epidermolysis bullosa, divided, of course, and renamed equally, of course. It does seem, sometimes, that the curse of terminology in dermatology will render it impossible as a study after a while. Brocq shows a lot of pictures of dermatitis herpetiformis in this chapter and says he calls it *dermatite polymorphe douloureuse* because he has included many more affections than Duhring has. It makes no difference that he is obscuring Duhring's conception, which itself is not so sharply defined as some of us would like to have it. What he does say (Brocq) about this inchoate group is to the point. As regards the central nerve changes in pemphigus it is likely that they and the bullæ are expressions of the same cause, a "poison," as neurologists say, and are not otherwise related. Dubreuilh and Thibierge close the volume with phthiriasis and pityriasis as their respective contributions.—Jas. C. Johnston.

An Introduction to Dermatology. Norman Walker, M.D. Second edition. New York: William Wood & Co., 1902.

It is a pleasure to see that Walker's book has had the success it deserves, and it is quite a feather in his cap that it has won its way to a second edition on this side of the Atlantic in the face of the rivalry of the American text-books. He is quite right in his supposition that its popularity is due to its simplicity and the absence of unnecessary detail, but he should add,—the charm of an easy and attractive style. He still pursues his ancient vagaries, such as the inclusion of pediculosis corporis among the purpuras and the identification of psoriasis with seborrheic dermatitis, but while they are not very good for the student, they are part of the personal note which runs through the book, and as such may be forgiven. Quite a number of new half-tone illustrations have been introduced, which add materially to the value of any such work. Walker has amplified and revised certain articles and has added others, such as the sections on blastomycosis and radiotherapy, but, owing to careful condensation, the book is no larger than formerly. Cornell students give it unstinted praise, and their criticism is by no means to be despised.—J. C. J.

Diseases of the Skin; Their Description, Pathology, Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children, and an Analysis of Fifteen Thousand Cases of Skin Disease. By H. Radcliffe Crocker, M.D., F.R.C.P., Physician for Diseases of the Skin in University College Hospital, etc. Third Edition. Revised and Enlarged. With Four Plates and 112 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1903.

The demand for a third edition of this work is the best evidence of the value and esteem in which it is held by the medical profession. The extraordinary advances which have been made in our knowledge of skin diseases within recent years has necessitated a complete revision of the work, with the introduction of much new material, embodying the results of modern researches and investigations relating to dermatology. The fact that many affections of the skin of more or less common occurrence are distinguished by certain phases or modes of expression which do not correspond to the classic types of the recognized dermatoses has led to the introduction of many new names or titles to indicate their distinctive characters.

For the incorporation of this new material nearly 500 additional pages were required, swelling the dimensions of the book to nearly 1,500 pages—nearly double the size of the first edition.

Among the new titles introduced may be mentioned the following: acrodermatitis perstans, persistent balanitis, cheilitis exfoliativa, lichen annulatus, erythema serpens and erysipeloid, erythema elevatum diutinum "Gayle" in man, X-ray dermatitis, toxin-serum eruptions, bronzing of the skin in diabetes, keratolysis exfoliativa congenita, porokeratosis, mal de Maleda, lupus marginatus, granuloma annulare, granuloma inguinale tropicum, granuloma pyogenicum, sarcoid, Mortimer's malady, pseudo-acanthoma elasticum, leukæmia and pseudo-leukæmia cutis, chloroma, endothelioma capitis, "Veld" sore, hydrocystoma, milium congenitale, acne keratosa, acne necrotisans, acne agminata, folliculitis, alopecia seborrhoica, alopecia cicatrisata, ulerythema, ophryogenes, folliculitis decalvans, lentigo senilis, blastomycosis hominis, etc., etc. Many of the newer diseases incorporated in the previous edition and which received only brief mention have in the present edition been treated most exhaustively and brought up to date.

One tendency of modern dermatology to be noted is the introduction into its terminology of new names or titles of diseases hitherto unknown. The claim that certain of these affections constitute distinct types or morbid entities is based upon the narrowest possible basis of pathological fact, and is, therefore, open to ques-

tion. Further advances in our knowledge and a clearer comprehension of the essential nature of these diseases will doubtless demonstrate this pathological unity with recognized dermatoses. We cannot too strongly protest against the taking of minute and unimportant shades of differentiation as a basis of distinction between diseases. To the general practitioner the refinements of terminology are the confusion of dermatology. The author of this work has not been carried away with this neological craze and has shown an intelligent discrimination in adding to our nosological category "new and hitherto undescribed forms of skin disease."

The introduction of so much new and valuable material serves to enhance the favorable opinion of this work, which we expressed in a notice of the former edition as follows: "The work before us necessarily contains much that will be found in other standard treatises on diseases of the skin, yet in the admirable arrangement of the material, the rejection of useless details, the clear and concise modes of expression, and a certain original but forcible method of treating the various subjects, he has produced a book which, in embracing all essential facts relating to skin diseases, bears upon every page the impress of the author's independent thought and observation. But while the work is largely a reflex of the author's individual views and experience, he has not neglected to draw upon the observation and researches of other workers in the same field, the results of which are digested and presented in an available form. Numerous references are made to recent dermatological literature for more extended information upon subjects which cannot be exhaustively treated in the necessarily restricted limits of a text-book. While especial prominence is given to the consideration of diseases most prevalent in Europe and this country, tropical and epidemic diseases are more fully treated of than is usual in works of this class."—P. A. M.

Portfolio of Dermochromes. By Professor Jacobi, of Freiburg im Breisgau. English Adaptation of Text by J. J. Pringle, F.R.C.P., of London. London and New York: Rebman, Limited, 1903.

The first volume, containing Parts I and II of Jacobi's admirable Atlas of Diseases of the Skin and Venereal Affections, is before us. A careful examination of these dermochromes, which are printed in natural tints by the four-color process, shows that they possess not only the charm of novelty, but the excellency of accurate delineations of the lesions of the skin with a faithful and life-like portrayal of the flesh tints.

The illustrations are for the most part taken from Neisser's models in the Breslau clinic, and are reproduced in colors by a new process, termed citochromy, invented by Dr. Albert, of Munich.

As the work is designed chiefly to meet the wants of the general practitioner, the subjects selected for illustration are, for the most part, examples of the commoner foms of skin disease, such as may be met with in every-day practice. Of special interest and value to the general practitioner as well as the student are the illustrations of the exanthemata—measles, scarlatina, varicella, variola, vaccinia, etc.

It is needless to say that accurate colored illustrations of the objective appearances of diseases of the skin are more valuable than any amount of descriptive text in familiarizing one with their distinctive features. Such object lessons are imprinted upon the memory, and enable the physician to recognize, often at a glance, the nature of the disease when seen in the living subject.

The descriptive text has been translated and adapted for the English reading medical public by Dr. Pringle. The text is clear, concise, and contains all essential details relating to the clinical features, the diagnosis, prognosis and treatment of the various affections delineated. The work is composed of four parts, bound in

two volumes (two parts to each volume), in full flexible leather, with gilt edges, making it handy for reference, and presenting a handsome appearance. The special excellencies of different plates will be commented upon in a notice of the work when fully completed. As there are two and in some instances three figures to each plate, the first two parts of forty-two plates contain ninety-six illustrations.

One feature which should commend this Atlas is the low price—$16 for the two volumes.—P. A. M.

ABSTRACTS.

The Classification, Pathogenesis, and Treatment of the Syphilitic "Deuteropathies." H. Hallopeau. (*Jour. Mal. Cut. et Syph.*, 1903—XV—241.)

The author wishes to substitute for the term parasyphilides the term syphilitic *deutero*pathies or *meta*-syphilides, claiming that the term *para*—meaning near or beside—does not apply to those remote consequences which Fournier has defined as "syphilitic in origin, but not syphilitic in nature." He states in a résumé of his article that: 1st. Syphilomes may give rise by different methods to secondary alterations which are only specific in their origin. 2d. The defective term parasyphilides must be abandoned. He suggests syphilitic deuteropathies or metasyphilides. 3d. These alterations may consist in active troubles of vascularization, with ensuing disturbance of nutrition, such as the peripapular anæmia or achromia and the peripheral hyperæmia and hyperchromia, which result in the pigmentary syphilides. 4th. In other regions, the hyperæmia may leave an inveterate œdema (labial œdema of Tuffier; œdema of the labia-minora of Fournier). 5th. Localized in that part of the cutis where the physiological activity holds in abeyance the nutrition of the epidermic products, the syphilomes necessarily bring about alteration or destruction of these products: Examples—alteration of the nail matrix—loss of nail; lingual papillæ—leucoplakia; palmar and plantar tegument—parakeratoses. 6th. Syphilitic cicatrices may become keloidal; 7th, or may by retraction produce ectropion with deuteropathic lesions of conjunctiva or obliteration of lachrymal punctæ; stricture of urethra, etc.

8th. Sequestra may determine a secondary inflammation, ending in suppuration, which, if involving the cranium, may produce a meningo-encephalitis.

9th. In diminishing the resistance of the vascular walls, syphilomes may give rise to voluminous aneurisms or to miliary aneurisms and rupture; thus cerebral hemorrhage may partially enter the domain of syphilis.

10th. Syphilomes of cavities in external communication with the air may bring about fetid and intractable suppurations.

11th. Compression of nerves by syphilomes may produce diverse troubles of sensibility and dystrophy.

12th. Tabes and general paralysis are due essentially to these alterations, localized in the first, diffused in the latter in the cerebro-spinal axis; they are active and migratory; they arise consecutively to the development of syphilomes in the centripetal roots and elsewhere; the most often by successive recurrences; the alterations of the arachnoid fluid, not constant, must be considered equally as secondary.

13th. Specific treatment is without action upon the syphilitic deuteropathies; direct means should be employed, according to the case; plastic operation in the case of ectropion, nutritive stimulants in pigmentary syphilides, compression for œdema, ablation for sequestra, disinfection for contaminated cavities.

14th. In tabes, specific treatment may act if the generative neoplasms are primitive or secondary; treatment must be intense and prolonged; by preference mercurial inunctions and iodide of potash in large doses.

15th. In general paralysis—mercurial treatment alone.

16th. Hereditary stigmata are absolutely refractory to specific medication.

MEWBORN.

A Case of Multiple Neurofibroma Cutis. F. v. KRZYSZTALOWICZ. (*Montshft. f. prkt. Dermat.*, 1903—XXXVI—421.)

In reporting a new case of this disease our author presents us with a study of the affection. It first shows itself in the very earliest years, sometimes being congenital. It is often inherited. The tumors are usually multiple, often in great numbers, even thousands of them being present. The majority of them occur on the trunk. In size they vary from that of a lentil to that of an adult head. They may be sessile or pedunculated. The smaller lesions are bluish or yellowish red, while the larger ones are of the color of the skin. At times a comedo will be found on the top of a larger sized tumor. Palpation shows them to be deep in the skin and movable with the skin. They are soft to the touch, sometimes imparting the sensation of fluctuation. In most cases they are entirely painless. Together with the tumors there are usually many pigmented macules of varying size and of *"café-au-lait"* color. There may be also *naevi molles* and small angiomata. The patients are often neurasthenic and of deficient intelligence; sometimes show defects in the bones, such as asymmetry of the skull and deformities of the spine. Histological examination shows that the tumors arise from the connective tissue sheaths of the cutaneous nerves, most probably at the place where the nerves and blood-vessels enter the true skin. It is probable that they are due to some form of disturbance in the development of the organism.

GEO. T. JACKSON.

Thiosinamin Therapy. DR. JULIUSBERG. (*Montshft. f. prkt. Dermat.*, 1903—XXXVI—451.)

By hypodermics of a ten per cent. solution of thiosinamin in a twenty per cent. solution of glycerin, Juliusberg has succeeded in making patches of scleroderma soft so that they could be pinched up; and in flattening out hypertrophied scars so that they became soft and stretchable. He found Unna's thiosinamin plaster also useful, but liable to produce more or less irritation. It was useless in lupus and in some scars following burns. A measles-like eruption may be produced by the injections.

GEO. T. JACKSON.

Lichen Ruber Acuminatus. J. HELLER. (*Dermat. Zeitshrft.*, 1903—X—153.)

Dr. Heller reports a case of this disease occurring in a boy three years old. He is inclined to believe that lichen ruber acuminatus and pityriasis rubra pilaris are the same disease, and the picture of his case is certainly similar to the picture presented by the latter. In his case subepithelial and intrapapillary round cell infiltration, often wanting in pityriasis rubra pilaris, is present, as well as the characteristic supra and intrafollicular hyperkeratosis. A cure was effected by the use of arsenic.

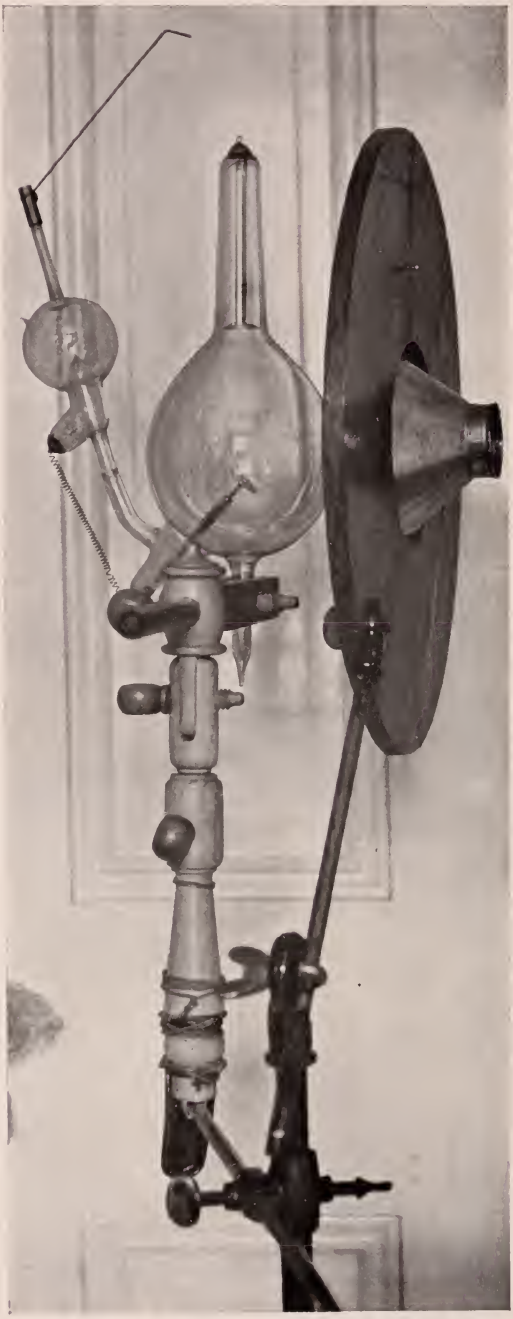
G. T. J.

Multiple Spontaneous Keloids. M. TSCHLENOW. (*Dermat. Zeitshrft.*, 1903—X—120.)

After an exhaustive study of the so-called true and false keloid, our author declares that it is impossible to make a sharp differentiation between them histologically. The disease belongs in the class of fibromata. The hypertrophic scar is not a keloid. A keloid begins in the cutis and consists in a great increase of connective tissue, commencing about the blood-vessels, together with a disappearance of the elastic fibers.

G. T. J.

PLATE XXXIX.—To Illustrate Dr. H. W. Stelwagon's Article.



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SOME OBSERVATIONS ON THE USE OF ROENTGEN RAYS IN DERMATOLOGY.

By Henry W. Stelwagon, M.D., Philadelphia.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

Ever since the experimental therapeutic use of this agent was stimulated by the recognition of its occasional accidental action on the cutaneous structures observed by various skiagraphers, the literature of the day has furnished varying statements of its value in many of the dermatoses. Led mainly by Freund and Schiff in Vienna, and Pusey and others in this country and in England and France, its employment has been gradually adopted by all, or almost all, those engaged in dermatological practice. For the time being, it has outranked everything else in its wide application, and the cutaneous disease is rare indeed that has escaped its trial. Like all new agents possessing active properties of cure in some diseases, or in some cases of some diseases, it has for the moment stampeded almost all else out of its way, and one not cognizant of the rampant days of sulphur, arsenic and other remedies of value might be led to think that the millennium of dermatological therapeutics had been reached; and that supplied with this agent, and especially if also supplied with the Finsen light, and the high frequency current, that the days of ointments, lotions and the like are to be no more. I am sure, however, that the discussion presented here to-day, while according the Röntgen rays a most important influence, will tend to hold its use, potent as it is for good and for bad, within reasonable bounds, and will aid in giving it its proper place in cutaneous therapeutics. I shall not attempt to go into the physics of the subject, a matter that is still involved in a good deal of confusion; nor speak at length of apparatus, technic, history of cases, etc., but merely touch lightly upon each, giving my own impressions and conclusions, colored, possibly, somewhat by the opinions and experiences of others as gleaned from their writings.

First as to apparatus. Here alone are many differences of opin-

ion, and almost as stoutly and warmly held as the opinions of religious and political contestants. We are told by many that static machines are much inferior in therapeutic value and hardly suitable for dermatological purposes. On the other hand, men of experience like Williams, Allen, Hopkins, and others, who make use of both static machine and coil, do not hesitate to say that they prefer the static machine for therapeutic effects. I have in my office a static machine with which I have treated many cases, and compared to the therapeutic work done by the coils at the Jefferson Hospital, Howard Hospital, and the Philadelphia Hospital, with which my other cases have been treated, I can see but little difference in the influence exerted. And this is not to be wondered at when one knows, as we all do know, that bad burns, or evidences of great energy, can be produced just as well by the static machine as with the coil. The one reported a few years ago by Cassidy, occurring in a physician who was using it on his own person experimentally, was one of the most serious burns that has been reported, leading to a lawsuit against the makers of the machine, who had guaranteed that static machines could not give rise to burns. Some say that with this machine burns are not so readily produced: probably this is true. I should say that if the selected apparatus is solely for the purpose of X-ray treatment, that the coil should be given the preference, if an electric current is handy or the recharging of storage batteries feasible. It has the advantage of greater steadiness and of working in all kinds of weather. Where, however, the apparatus is to be used for other therapeutic purposes besides X-ray work, or is to be used in country or village districts where electric current or recharging of batteries are not at all feasible, the static machine is to be given the preference. With the static machine in places where the electric current is obtainable, besides making use of this for motive power, it permits the advantage of an electric heater in the machine case, and this will keep the apparatus thoroughly dry and workable. As to the size of the coil and machine, probably the larger the better, but the coil with a capacity of a six-inch spark, and the static machine capable of generating a good eight-inch spark will do excellent work. The coils, which I have the privilege of using at the several hospitals named, produce respectively ten-inch, twelve-inch and sixteen-inch sparks. The static machine in my office produces, on the average, a good thick eight-inch spark. One of the coils is energized by storage batteries, and the other two by the 110-volt direct electric current. I confess that therapeutically for skin work, there appears to be but little difference between the several varieties of apparatus

which it has been my privilege to observe; the larger coils having possibly a somwhat greater value. The static machine, if the plates are of glass, should have at least eight revolving plates, twenty-eight to thirty-two inches in diameter; if fewer plates or if smaller the revolving plates should be of material permitting rapid revolution for compensation. The machine in my office, owing to the somewhat limited space available, is small, consisting of eight plates in all, four of which (the stationary ones) are of glass, twenty-eight inches in diameter; the other four are of hard rubber, twenty-four inches in diameter; these latter are run at a speed of 1,000 to 1,500 revolutions a minute, and at this speed the machine produces a good, workable current.

The vacuum is another factor upon which there is considerable disagreement among those engaged in cutaneous practice. Williams, who has had a great deal of experience in the treatment of superficial epitheliomata, strongly favors the lowest possible vacuum; that equal to a spark gap of but a fractional part of an inch. On the other hand, Crocker and a few others hold that the moderately high or high vacuum is to be preferred,—giving the best results and the least chance of burns. The largest reports of cases in our domain, by Pusey, Hyde and Montgomery, Pfahler, Leonard, Sweet, Allen and others, are based upon the use of a moderately low vacuum;—that equal to a spark gap of about two inches. It is with a vacuum of the last named that my own work has been done, and this upon the whole has seemed to me satisfactory. There is no unanimity, however, on this point, for both good and rapid results have been recorded as following the employment of a high or moderately high vacuum. It is not improbable that cases which seem unyielding when a tube of low vacuum is used may show improvement if the vacuum is raised; that seemed to be so in one of my epithelioma cases. All these remarks upon vacuum presupposes the employment of a tube susceptible of regulation, and I think it now generally agreed that such tubes are always to be preferred. Another point of great interest and importance is that which concerns the proper degree of action. Here also there is a wide difference of opinion. Several, as Pfahler, Merrill and Johnson and some others, consider that treatment pushed to the point of moderate or decided dermatitis is requisite, Merrill and Johnson and one or two others even going so far as to say that for results, a destructive X-ray action is necessary. Williams, Allen, Sweet, Leonard, Zeisler, Campbell, Hyde and Montgomery, and many others, report cases of cure without the production of any conspicuous X-ray effects.

An important desideratum, that needs scarcely to be mentioned, is the protection of other parts not being treated from the action of the rays. Various plans are in vogue, and are known to us all. The plan which I have found the most convenient is that by means of a thin wooden disc, fifteen inches in diameter, with one side covered with thin lead foil; this disc has a large central opening which may be made smaller for the individual case by means of attached, swinging, smaller-sized perforated discs. The disc is attached to the end of the projecting arm of a photographer's head-rest; it can be thus turned and adjusted at any height or angle and in almost any position. This stand, with its protecting disc, was suggested to me by Dr. Pfahler, who has long employed it. I have added to its usefulness by retaining the back-rest, to which can be fastened the movable support and arms of an ordinary wooden tube-holder stand for holding the tube. As thus rigged, the stand answers the purpose of both a protecting screen and tube-holder. It is simple, convenient, inexpensive and requires but little space. When the distance of the tube from the patient is to be more than five or six inches, a projecting funnel with proper-sized opening can be fastened to the screen with rubber bands, and the projecting aperture brought directly over the part to be treated. With such a screen and arrangement one could do away with the necessity of attaching any protecting foil to the patient; but it is probably better to place a narrow band of foil around the diseased area, to protect the surrounding skin from stray rays. Not only is the protection of the patient to be thought of, but if engaged to any extent in this kind of work the operator himself must exercise caution. The hands seem more susceptible than other parts, and those who are especially susceptible, among whom I must include myself, should resort to some protective covering. I employ loose gloves having an interlining of tinfoil. They are somewhat clumsy, but all manipulations can be easily performed and they answer their purpose. The disadvantage is that the foil, after a comparatively short time, begins to crack, break and crumble. I have recently adopted an improvement, having two pairs of mittens, one pair several sizes larger than the other; the smaller pair can be readily enveloped with tinfoil and the larger drawn over them and fastened with a few stitches; this plan permits a renewal of the foil interlining without the expense of new gloves each time. The scalp is another part of the surface which may require attention in one busy with the use of X-rays. I have had a few X-ray workers come to me with a tendency to thinning of the hair, which had in all probability been induced by constant exposure

to the rays. Another effect that an occasional patient has called attention to, and which I think I have sometimes myself experienced, is a slight dizziness and headache following exposures.

Coming now to the part of the subject which, after all, is the end of all our efforts, the cure of disease, one naturally asks to what extent have the Röntgen rays enhanced our therapeutic resources. I should say, judging from my own somewhat limited experience, that it has done so quite materially. Replying to this question from the standpoint of a reviewer of the subject, I should say that if we can believe all that has been published about it, that it is one of the most important therapeutic measures that we have added to our armamentarium for some years. Unfortunately, much that we read must be shorn of the enthusiasm of the reporters; hasty reports from unreliable observers, based upon one or two hastily and incompletely treated cases, must be eliminated; and medical hysterics must be reckoned with before a judgment can be passed upon any such question. Personally I have not given up everything to the X-ray treatment; and therefore, except in epithelioma, lupus vulgaris, cutaneous tuberculosis, lupus erythematosus and in other diseases, I have employed it only in those cases which have proved rebellious to the ordinary methods. It is generally recognized that epithelioma stands first in the list of diseases in which the Röntgen rays have proved of value. I can add my testimony to its curative properties, referring especially to the rodent ulcer type and the more superficial forms of the disease. It is not equally valuable, however, in all, some responding promptly and rapidly, others slowly, and some scarcely at all. So marked a difference in this respect is shown as to suggest the probability that there are several pathologically as well as etiologically distinct forms of this disease. In one instance of Paget's disease, in which the disease was still in the eczematoid state, no influence whatever seemed to be exerted. The cases most favorable in my experience, and I think likewise in the experience of most others, seem to be those of the rodent ulcer type occurring in the neighborhood of the eyes, especially those involving the side of the nose, adjacent cheek and verging on the lid. Such cases seem to do well at once. In the methods employed in the treatment of epitheliomatous cases, observers have differed considerably. Some believe that the production of visible X-ray effects are not necessary at all in order to bring about a result. At the other extreme stand those who advocate pushing the treatment to actual destructive or caustic action. Fortunately this latter is not sustained by most observers, and if such were really necessary the Röntgen-ray

treatment would not supplant other well-known methods. The records show very clearly that some cases will be favorably influenced without the production of X-ray dermatitis, even of a mild grade, and to this fact I am able to subscribe. On the other hand, it is just as certain that in some cases there is no positive effect until the X-ray exposures are pushed to the point of exciting a mild erythema; in others again the favorable action halts or does not begin at all until after more prolonged exposures or closer action of the rays provoke an active dermatitis. Some observers are, in fact, firm advocates of immediately producing a moderately severe dermatitis and keeping this action up more or less continuously. My own experience would indicate that but few cases will show much progress unless X-ray effects to the degree of a faint flush, usually an extremely slight X-ray erythema, is brought about, and some cases will lag until spurred up by quite a sharp erythema and superficial vesication sufficient to necessitate a temporary suspension of the treatment. I always begin the treatment of these cases with the tube at a distance of ten to twelve inches with an exposure of five minutes, and do this, as a rule, twice weekly for two weeks. If there is no reaction or if no improvement is shown, the exposures are made three times weekly for ten minutes with the tube at eight inches and gradually shortening this distance to five inches. If there is still no reaction or no improvement, the sittings are prolonged up to fifteen or twenty minutes with the direct intention of producing a mild erythema. This is sometimes slightly overreached and a moderate grade of dermatitis excited, necessitating a discontinuance. In some cases this sharp action is followed by a steady improvement, the improvement continuing long after the X-ray dermatitis has passed away. In a few instances the patients become provoked at the degree of dermatitis excited and the discomfort caused and discontinue their visits. Mollified by the favorable after-effects, however, they come back some time subsequently to show that a cure has resulted. The behavior of the epitheliomatous area as the cure takes place is now well known. In some instances the result is achieved without any breaking down of the diseased tissue; in others this melts away into an open ulcer, which is gradually replaced by healthy tissue. The scars left after this plan of treatment are usually extremely insignificant, and in some cases scarcely noticeable. Unfortunately in most instances of epithelioma the treatment must be long continued before a final favorable result is achieved. In others, the minority, a cure is sometimes attained in fifteen to twenty-five exposures. In one of my cases of superficial epithelioma of the side and

bridge of the nose only fifteen exposures were required and the result was accomplished without the production of the slightest X-ray erythema; and now, after some months' observation, the cure still holds good. Another case of circumscribed, slightly infiltrated epithelioma of the back of the hand developing upon a senile keratosis was completely relieved in fourteen or fifteen exposures. In one of these two cases the static machine was employed, and in the other the coil; (in the latter, treatment was given by Dr. Metheny). These are the most satisfactory cases. If such results were so quickly and easily obtainable in all cases, this method would supplant every other; but if, as is more commonly the case, treatment must be so prolonged, it is a question whether, with such an outlook, another plan of treatment by excision, curettage or caustic enucleation should not be urged upon the patient. In fact, I am becoming more and more impressed with the belief that the best of all treatment for the average case is first enucleation, either by excision, curette, or cauterization as may seem the most expedient in the individual case, and the immediate supplementary applications of the X-rays. This plan would give the most rapid results and at the same time give the patient the least chance of recurrence. But many patients will prefer the often long and comparatively mild method by the X-rays, rather than submit to the quicker and more energetic plan. It is only fair, however, that the facts of the various plans should be first clearly stated to the patient, and the probability fully set forth that the X-ray treatment alone would be a long and tedious one.

In the treatment of lupus vulgaris, as is well known, the beneficial influence of the X-ray method is at times decidedly evident, and favorable reports are to be found recorded by many reliable diagnosticians. It is just as well to bear in mind in this connection, however, that quite a number of so-called lupus cases reported as cured from various parts of the country were not lupus cases at all, but superficial epitheliomata of the rodent ulcer type;—description, history of the cases, duration, age of the patient, and accompanying illustrations show this clearly enough to the expert or to one at all familiar with lupus cases. My own observations, so far, cover only two cases of lupus vulgaris, now under treatment, both of which are extensive; and as yet no expression as to the final result can be given; but both have slowly and steadily improved. In one case of a circumscribed scrofuloderm of the thigh in a youth of nineteen, a cure has practically been effected by twenty exposures; and this case had been previously subjected to the curette and cauterization by others, always

with rapid relapse. Healing began in the same manner as that usually noted in epithelioma,—by a drying and closing up of the ulcer. The result has taken place without X-ray erythema. In a striking and extreme case of tuberculosis involving nose and adjacent parts in a colored boy under my care at the Jefferson Hospital and subsequently in the skin ward of the Philadelphia Hospital, the result of this treatment (given by Dr. Pfahler) has been most gratifying. At the present writing but a slight vestige of the disease remains, and with every promise of a complete recovery. But little effect, however, was brought about in this case until a moderate erythematous dermatitis was provoked and kept up. Owing to the greater amount of surface in lupus and other tuberculous cases capable of being treated at one sitting, the X-ray method promises to be a formidable competitor to the Finsen method. It has, moreover, the additional advantage of being applicable in the treatment of disease on the mucous membrane of the nares, mouth and throat. In four cases of lupus erythematosus treated by the X-ray, I have had in one case (a sluggish and infiltrated type of long duration, involving the greater part of the nose and adjacent parts under the eye) an almost complete cure. In two cases, involving considerable areas, there has been a steady and decided improvement; both being further towards recovery in a period of several months, despite long intervals between treatments, than could be accomplished in any other plan. Improvement in one of these two cases did not begin until a mild X-ray erythema had been provoked. In the remaining case there was no positive result whatever.

In acne cases I have used the X-ray treatment in quite a number of instances, and have found it useful; but I cannot say that it is so uniformly serviceable as noted in the experience of Zeisler, Campbell and some others. It is true that I treated with much more timidity than did the former, and the lack of markedly beneficial results in some of the cases may have been due to this factor. The cases which seem to be most favorably influenced are those of the sluggish, indurated types. Treatment was begun in the same cautious way as detailed in the management of the epitheliomatous cases, the distance of the tube was gradually reduced from ten to five and even four inches, and time of exposure slowly increased up to ten and fifteen minutes. It would appear from my observations concerning this disease that the most successful cases were those in which treatment was slowly pushed to the point of producing a mild to moderate erythema. For the treatment of the many mild cases of acne characterized by relatively

few scattered and more or less evanescent lesions this plan of treatment does not appeal to me as appropriate. As to the usefulness of this method of treatment in acne rosacea, my conclusions are about the same as with acne, some cases quickly and decidedly benefited and others practically not influenced. There seems no doubt, however, that it often has an effect upon the hypertrophy, and that the patulousness of the gland ducts, both in this disease and in oily seborrhœa, is very materially lessened.

I have now made use of the X-rays in quite a number of cases of psoriasis, employing it only in those cases of considerable surface involvement of rebellious type. It certainly promotes the disappearance of the eruption in most instances, but in many of them only when the treatment is carried to the extent of a slight flush or erythema. The distance of the tube in these cases was from ten to five inches, and its position shifted from time to time so as to expose the whole part equally. One would scarcely be justified in pushing this treatment in this disease to the production of active and troublesome dermatitis.

In eczema my experience has been a moderate one, but it has been such as to give it some value. The cases chiefly treated were those of a persistent and recurring type involving the hands, especially those presenting somewhat circumscribed patches, and also those sluggish cases situated upon the lower leg, ankle region, and soles of the feet. The distance of the tube was ten to six inches, and at first with an exposure of only three minutes. The time was gradually lengthened to ten minutes if no untoward symptoms arose. The results were not brilliant; some cases were benefited, a few apparently cured, and others practically uninfluenced. The treatment was kept within the limits of the production of the faintest reaction, and indeed in most instances without producing the slightest X-ray effects. Perhaps a freer use of the plan would have shown better results, but the X-ray is a kind of therapeutic energy that one may properly hesitate to employ boldly in such diseases.

In keratosis of the palms and soles I believe we have in the X-ray a method of treatment that promises much. Others have reported cases in which rapid and curative action was observed. To some extent this has also been my experience. In several cases in which it was employed there was improvement in all but one, and cure in one. Whether the cure is permanent I cannot say, inasmuch as not more than several months have elapsed since treatment was discontinued.

A condition which I discovered accidentally to be favorably influenced by the X-ray treatment is local hyperidrosis. In one instance

of eczema of the hand, in which it was being used, an existing hyperidrosis of the palm of moderate degree was very perceptibly benefited. This led me to try it in other cases of hyperidrosis of this region, and in one instance with pronounced lessening of the secretion, and this without producing any unpleasant X-ray effects.

I have not employed the X-rays in hypertrichosis, sycosis, favus and some other diseases in which others have reported favorable results, and therefore have nothing to add as to its possible advantages in such conditions. My conclusions as to the value of the X-ray in the several diseases in which I have employed it are practically embodied in the statements made in connection with each disease. I can only add that we have in the X-ray a potent remedy in some cutaneous diseases which finds its first importance in the treatment of some of the epitheliomata; that it can be also productive of benefit and even cure in some cases of lupus, scrofuloderma, and other forms of cutaneous tuberculosis; and will probably prove of permanent curative influence in some cases of lupus erythematosus. In other skin diseases, more especially acne of stubborn type, and in acne rosacea, its effects are occasionally brilliant; and in certain limited keratoses, especially of the palms and soles, it may be resorted to with a good chance of its being beneficial and occasionally curative. The same may be said probably also of the local forms of hyperidrosis. In eczema, psoriasis and other like comparatively inoffensive dermatoses I should reserve it for those cases which prove intractable to other plans of treatment. Finally, while recognizing the great value of this therapeutic agent in dermatology, I hesitate as yet from my own relatively limited experience to subscribe without reservation to its possession of the almost marvelous powers accredited to it by other writers in so large a number of dermatoses.

THE RATIONALE OF AND THE INDICATIONS FOR THE THERAPEUTIC USE OF ROENTGEN RAYS.

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AMONG the most important questions in radiotherapy at the present time are the rationale of and the indications for the therapeutic use of X-rays; and to these two questions I shall as briefly as possible devote my attention. The rational basis for the use of X-rays for therapeutic purposes must be found in the changes produced by X-rays upon tissues and upon bacteria. The microscopical changes occurring in tissues affected by X-rays have been studied by various observers among whom may be mentioned especially Oudin, Barthelemy and Darier; Grouven, Gassman and Lion; and Scholtz. It is a fortunate fact, and one testifying to the uniformity of these changes, that there is a striking agreement in the findings of the various observers. The time is too short to consider in detail these findings, but they may be briefly summarized.

The first changes that occur are those in the epidermis. There is a marked hyperplasia of the prickle-cell layer, with increase in number of cells, and increased formation of pigment and of keratohyalin, followed after further exposure by breaking up of nuclei or division of the nuclei without true mitoses occurring, and later degeneration of the cells and, if the process proceeds further, there is complete disintegration. Along with these changes there are similar changes in the appendages, which may, if the reaction is sufficiently intense, lead to atrophy or entire destruction. All the changes point to a reaction produced by an irritant of unusual character. As Oudin, Barthelemy and Darier have comprehensively expressed it, "This irritation seems to increase the vitality of the least differentiated elements, while it produces degeneration and atrophy of the more highly differentiated structures,—hairs, nails and glands."

The changes in the corium are of similarly striking character. The earliest changes noted are those of an ordinary inflammatory reaction, with a free exudation of leucocytes. The corium becomes œdematous, the connective tissue fibers swollen and their staining reaction not as definite as normal. Next, striking evidences of changes in the blood vessels are apparent. As Scholtz describes it,—and other observations corroborate his description—"The cells of the intima are swollen, project into the lumina of the vessels, in some places show

evident proliferation with a tendency to fall off into the blood vessels."

The changes produced in diseased tissues are similar in character to those seen in normal tissues. These changes have been studied by numerous observers in various conditions; in eczema, psoriasis, lupus, lepra, carcinoma, etc. The changes in carcinomatous tissue are, for obvious reasons, of especial interest, and, as my studies of carcinomata under the influence of X-rays agree with those made by other observers, I may be pardoned for briefly describing them.

Studies were made upon tissues from tumors in various stages of subsidence. Tissue taken from nodules of cutaneous carcinoma, showing the first effects of X-ray irritation, present changes only in outlying carcinomatous cells at the periphery of cell masses. At this stage there is a peculiar breaking down and disappearance of these outlying cells. The outlines of the cells are vague or lacking. The nuclei are fragmented and the fragments scattered, leaving merely dim, shapeless remnants that take a pale-blue stain with hæmotoxylin. In some of the blood vessels, especially those connected with the carcinomatous tissue, there is an extreme degree of endarteritis, almost or entirely obliterating the lumina. Blood vessels lying more distant from the tumor cells show no such changes. Sections taken from the border of a carcinomatous ulcer when the border had flattened down completely and lost its nodular character show similar but more marked changes. Almost no trace of carcinoma is left. Beneath the epidermis there is a considerable layer of fibrous tissue, in which there are areas staining pale blue with hæmotoxylin, that are evidently made up of material similar to the material found at the periphery of the islands of tumor cells in tissue taken for examination when the process was just beginning. The areas which were occupied by carcinomatous tissue are now filled by connective tissue.

Considering the tissues studied at different stages of the process, the salient features are as follows: The first changes occur in the cells at the periphery of the islands of carcinoma. Later the process involves all of the mass, invading in succession the cells from the periphery to the center. The cells are found in various stages of destruction. They gradually disappear by a process which seems to be some form of solution of the cells (cytolysis) which is followed by absorption of the degenerated substance. The blood vessels, especially the small ones which are in close relation to the tumor, show marked endarteritis.

From the various findings I believe certain generalizations may be made. In the first place the process is one primarily affecting the

tissue cells themselves. There is evidence first of stimulation of cellular activity and later, if the effect is intense, there follows derangement or disintegration of the affected cells. The changes occur first and most strikingly in the epithelial structures, next in the blood vessels; but it is likely that they develop also, though to a much less degree, in the cells of all the tissues of the affected areas. An important fact is that the changes in the blood vessels do not precede the changes in other tissues, but are found later at least than the first changes in the epithelium. It may be stated, therefore, that the changes in the cells are not, in all probability, primarily a result of circulatory disturbances, and that accordingly the changes in the blood vessels are not the essential cause of X-ray injuries. These vascular changes are probably merely of the same character as those which occur in other tissues at the same time. It is worthy of note that attention has not been called especially to changes in the nerves. In the reaction produced in pathological tissues the especially significant fact is the degeneration and disappearance of the pathological tissues under X-ray effects which are not sufficiently intense to destroy the healthy stroma. This is evidently the key to the explanation of the use of X-rays in the treatment of certain diseases like carcinoma, the morbid products of which must be gotten rid of in order to get relief. Such a degeneration and absorption of diseased cells, and their replacement by healthy connective tissue, without the destruction of the healthy stroma, is, of course, a most significant and important fact.

The effect of X-rays on bacteria in culture media may be very quickly disposed of. The evidence in favor of such an effect is almost confined to Reider's claims. The investigations of Berton, Minck, Wittlin, Wolfenden & Forbes-Ross, Bassett-Smith and others and the very thorough study of the subject by Zeit, seem to leave no room for doubt that X-rays have no destructive effect upon bacteria in cultures. The behavior of bacteria, however, in living tissues under the influence of X-rays is quite another matter. The cleaning up of infected ulcers, the disappearance of sycosis and acne, which are now matters of common observation, to take no other illustrations, leave no room for doubt that pathogenic bacteria in tissues may be destroyed under the influence of X-rays. The fact that organisms in inert media are uninfluenced by X-ray exposures, while the same organisms in living tissues can be destroyed under the influence of X-rays, establishes that this destruction is not due to X-rays *per se*. The explanation doubtless is that the cells, under conditions of activity excited by

X-rays, are rendered better able to cope with the invading organisms. As has been suggested by various observers, this effect on bacteria in tissues is in all probability caused by increased phagocytosis.

It seems to me that from a consideration of the effect of X-rays upon tissues and upon bacteria in living tissues, it is not difficult to arrive at a fairly accurate estimate of the indications for the therapeutic use of this agent. The actions of X-rays which offer opportunities for therapeutic applications are as follows:

First: The action in causing atrophy of the appendages of the skin.

Second: The destructive action upon organisms in living tissues.

Third: The effect upon the metabolism of tissues.

Fourth: The power of destroying certain pathological tissues.

Fifth: The anodyne action, to which attention has been called by the effect upon pain in malignant growths, in neuralgias, and in diseases of the skin accompanied by itching.

It is evident that such a group of qualities offers large possibilities of application.

Applying these effects of X-rays upon tissues to the treatment of cutaneous diseases, it may be said broadly that X-rays offer possibilities of usefulness in those affections in which the following indications exist:

I. To remove hair.
II. To cause exfoliation of the nails.
III. To cause atrophy or decrease in functional activity of the sebaceous glands.
V. To destroy bacteria.
VI. To influence the nutrition of the skin.
VII. To destroy tissues of low resistance.
VIII. To relieve pain or itching.

Taking up these indications in detail:

I. Where it is desired to remove hair:

A—HYPERTRICHOSIS.

There is a good deal of testimony as to the value of X-rays in the treatment of hypertrichosis, which I shall not undertake to review here. My own experience in hypertrichosis extends over a considerable number of cases. There can be no question, in my opinion, that in many cases hairs can be permanently removed by the use of X-rays.

In my experience the results have been satisfactory in, roughly speaking, seventy-five per cent. of the cases. I have some cases in which there has been no return of hair after more than a year since the last treatment. In a few cases I have failed to permanently remove the hair by any reaction that I was willing to produce. And the work is so beset with difficulties that I do not undertake it unless the conditions are very urgent. Hypertrichosis is the one condition in which my experience with X-rays has been less satisfactory than I anticipated.

B—SYCOSIS AND TINEA SYCOSIS.

My experience in these conditions corroborates that of other observers who have found X-rays decidedly useful. The method is not only free from many difficulties attending other forms of treatment, but I believe may be relied upon to be effectual in some cases of sycosis which have heretofore proven unmanageable. The method is, I believe, a very important addition to the means at our command for treating intractable cases of these diseases.

C—FAVUS AND TINEA TONSURANS.

There is considerable testimony as to the value of X-rays in favus and tinea tonsurans, but the permanency of the results is not, in my opinion, conclusively established. There seems still some room for doubt as to the practical value of the method in these conditions.

II. It is possible that X-rays might be of use also where one wanted to cause exfoliation of the nail substance. This possible application of radiotherapy is more theoretical than practical, and as far as I know no such application has been attempted.

III. Where it is desired to cause atrophy or decrease in functional activity of the sebaceous glands.

A—COMEDO AND ACNE.

Members of this Association have already called attention to the value of X-rays in the treatment of acne. In the May (1902) number of the Journal of Cutaneous and Genito-Urinary Diseases I reported in detail my experience in eleven cases of acne treated with X-rays. My experience now covers a good deal larger number of cases and has confirmed the favorable results there reported. The improvement in the skin is all that could be hoped for, and is lasting. I have a few cases which were very thoroughly treated, in which inflammatory lesions have not occurred in a year without treatment and hardly a comedo. In some of the cases after they are thoroughly

cleaned up an occasional lesion develops, but these relapses are so slight as to be of little consideration, and prove easily amenable to treatment. I have seen no bad effects upon the skin as a result of the treatment of acne, and I have no doubt that the treatment can be so carried out as to be effectual against acne without in any way damaging the texture of the skin. I have used the method in all of the usual types of acne—in the ordinary mild juvenile acnes, and in severe, deep-seated, indurated acnes of long standing—with equally good results. The transformation that can be wrought in the most severe indurated acnes is little short of marvelous. The lesions cease to occur, the stains gradually disappear, and in time there is left a smooth, soft skin, with no trace of the disease except the white scar. I have seen this improvement in several indurated acnes of as severe a type as I ever saw; cases that I am sure could not have been so improved by any other method of treatment. In my opinion there is no doubt that radiotherapy, properly carried out, gives results in acne hitherto unknown.

B—ROSACEA.

In relieving the folliculitis accompanying rosacea, I have found X-rays of as great value as in ordinary acne. The improvement of the rosacea under the treatment is marked, probably chiefly as a result of the elimination of the accompanying folliculitis; but I have not found the rosacea to disappear entirely under X-rays alone. As a result of the treatment with X-rays, however, the cases are put in the most favorable condition for further treatment by other methods.

IV. Where it is desired to cause diminution in the functional activity of the sweat glands:

A—HYPERIDROSIS.

Some time ago I called attention to the theoretical possibility of this application of X-rays. I know of no report upon the subject in the literature, but I have a verbal report of an excellent result from X-ray exposures in overcoming excessive sweating in the axillæ.

V. The destructive effect of X-rays upon bacteria in tissues, of course, comes into play in a number of affections in which the use has been suggested above, and such a quality offers possibilities of the widest application in bacterial diseases of the skin. The use in lupus vulgaris is the most brilliant application in diseases of bacterial origin that has yet been made, but in this condition the effect in destroying tissues of low resistance is doubtless of greater moment than the germicidal effect. The very great value of X-rays in lupus is, I take

it, accepted. My experience has been as favorable as that of other observers, and, taking everything into consideration, in my opinion no other method except Finsen's is worthy of mention in the same class with X-rays in the treatment of lupus.

VI. The stimulating effect or other influence of X-rays upon the metabolism of the skin offers a wide field of application. It is probably this effect that explains in large part the success that has followed the use of this agent in eczema, lupus erythematosus, lichen planus, psoriasis and in the entire group of chronic inflammatory diseases of the skin, in which stimulation is necessary in order to cause absorption of inflammatory products. My experience in the treatment of chronic indurated eczemas has been confirmatory of the favorable results reported by other observers. In the treatment of localized intractable patches of eczema I believe X-rays offer a valuable addition to our armamentarium. What is said of eczema applies also to lichen planus, in which I have found radiotherapy of excellent service. I have also been able to clear up patches of psoriasis readily by X-ray exposures; but, while the recurrence of the patches may perhaps be put off longer than usual by this treatment, there seems to me no reason to expect that their recurrence will be entirely prevented. In three cases of lupus erythematosus I have gotten very great improvement, if not entire disappearance of the disease, from radiotherapy, but long enough time has not elapsed to offer an opinion as to the final results.

VII. The power of causing the destruction of tissues of low resistance without the destruction of the healthy stroma is the theoretical indication for the use of X-rays in malignant diseases. I trust the value of X-rays in cutaneous carcinoma is now accepted. My group of epitheliomata treated by this method is now pretty large, and the greater my experience becomes the greater faith I have in the value of X-rays in their treatment. The scars are of the best character possible, and the results are, there is every reason to believe, as permanent as can be hoped for by any method of treatment. Some of my cases have gone eighteen months or more without recurrence, and the character of the scars in the cases generally leaves, I believe, little room for doubt as to the permanency of the result. The ease of application of the method, the freedom from pain, the excellent character of the scars, and the adaptability of the method to certain inoperable lesions and to lesions in such awkward localities for the treatment of epitheliomas by ordinary methods as the eyelids and nose, are the advantages which radiotherapy offers above other methods of treating epitheliomata. The tediousness of the treatment, as first

carried out at least by me, has been overcome by further experience. I have recently been able to treat successfully numerous cases with from five to ten exposures, either given within two weeks or stretched over several weeks, and with the formation of a healthy scar within two weeks after the appearance of the first reaction. That means that the treatment of these cases can, under favorable circumstances, be reduced to three or four weeks, and better cannot be done by any other method.

VIII. The anodyne effect of X-rays comes into play in dermatology in the treatment of itching dermatoses. I can add my testimony to that of others as to the value of X-rays in relieving the itching of eczemas and other inflammatory processes in the skin, and in the relief of the various forms of pruritus. I have seen the most signal benefit follow the use of mild exposures in anal and vulvar pruritus.

It is, of course, impossible that any such classification of the indications for the therapeutic application of X-rays as I have attempted above can be entirely comprehensive and accurate. No classification can be entirely satisfactory until our knowledge of the pathology of disease becomes absolute. The attempt at classification has been made in order to show in a general way the possible field of application of the agent, and to systematize as far as possible its application. It is a not uncommon remark, and one frequently made with an air of broad-minded erudition, that the use of X-rays as a therapeutic agent is entirely empirical and that in working with the agent we are working in the dark. A little consideration, I think, shows that this is far from the fact. There is no therapeutic application of X-rays that has been successfully made that is not in consonance with our present knowledge of its effects upon tissues. Its use as a therapeutic agent is, in fact, much less empirical than the use of quinine or mercury or arsenic, or many other of our orthodox remedies, whose standing in therapeutic society is of the highest respectability.

DISCUSSION.

Dr. L. A. Duhring would say that his attention was first drawn to the practical use of the Röntgen ray as a therapeutic agent some five or six years ago, in one of their hospitals. He had since observed its use in numerous cases, until today he was firmly impressed with its value as a therapeutic agent in many diseases. He had had the opportunity of following up some of these cases, especially in the Philadelphia Hospital, where it had been in constant use for several years, and he had

seen them both before and after treatment. He was more and more convinced each year, of the value of the agent in diverse diseases.

There were several interesting points that had not been brought out in the papers just read, and they were of practical import. Allusion had been made by both the readers to the distance of the tube from the patient, but not much had been said about the energy used, whether a low vacuum or a high vacuum. His experience had been, that we could get excellent therapeutic results, for example, in carcinoma, by the use of the low vacuum. In a case under his care now, a man of sixty, with a cutaneous carcinoma of the nose, had been operated upon with caustic five years ago and apparently cured. It had recently recurred, however, and for the past three or four weeks he had been treating it with a low vacuum tube without producing any inflammatory reaction, and the lesion was gradually disappearing. He believed in most inflammatory diseases better results could be obtained from the low vacuum than from the high vacuum, and if we persisted in the use of the low vacuum tube we would avoid the well-known unpleasant results. A notable instance of this occurred in one of the Philadelphia hospitals in the treatment of a case of lupus vulgaris. The case was a desperate one, and regarded as being almost beyond the pale of therapeutics. They used the Röntgen rays, making two exposures in all, each of ten minutes and with what was considered then to be a moderate amount of energy, this treatment was followed by a violent inflammatory reaction, deep ulcers resulting, from which the patient did not recover for two years, being practically confined to bed most of that time. Since that experience, he had been very cautious in advising the treatment, and with the use of the low vacuum tube his results had been much more satisfactory. A patient of his last year from Ohio was suffering from lupus vulgaris which had existed for twenty-five years. The Röntgen rays were applied, with the low vacuum tube, but no improvement was noticed for a month or six weeks: then the disease gradually began to improve and the skin was much better when the patient left for home. Three months later it was reported that the improvement had slowly but steadily continued.

Another striking case in mind was one of chronic circumscribed psoriasis in an elderly gentleman, whom he had treated for a long time for repeated recurrences of the disease. The case always improved under general and local treatment, but this particular patch, which was thick, had existed for a year or more and had failed to yield to the ordinary methods. After three or four weeks' treatment with a low vacuum tube it almost entirely disappeared. At the end of four days after the first application there was very marked improvement.

Dr. James C. White wanted to commend especially the temperate, moderate tone with which these papers had been presented, so very

different from much that had characterized the writings upon this subject within the past few years. They carried on their face the conviction that we might rely fully upon the very modest results which they claimed.

His own results had been limited, excepting so far as the cases treated in the hospital were concerned, and those would be presented by his colleagues.

He wanted to add a word of caution with regard to a point to which the papers did not give sufficient attention. In cases of rebellious chronic infiltrated eczema or psoriasis it was certainly our duty to try the effect of the X-ray treatment. He had seen surprisingly beneficial results follow the use of the rays in both of these conditions, as well as in sycosis of the beard, but he had also seen in such cases very injurious results. In the particular instances in mind the applications were made by men of great experience in the handling of the apparatus, and the ill effects, apparently, occurred in spite of every precaution. He was treating at the present time three cases of severe, extensive dermatitis which were infinitely worse than the disease for which the treatment was employed. The powers of repair seemed to be absolutely paralyzed by this agency; the suffering had been intense, and the response of this form of dermatitis to ordinary remedies seemed to be *nil*. We were always bound to consider that possibility when we advised the use of this agent upon cases which in themselves were not serious—in which the prognosis was not serious.

He still held that it was our duty to try other methods than the X-rays in cases of tuberculosis and superficial carcinoma, where immediate surgical measures were more reliable, and that the ultimate use of the rays should be confined to instances where the knife or cautery was not considered advisable.

Dr. L. Duncan Bulkley complimented Dr. Pusey upon the temperate character of his paper, which to his mind was the best presentation of radiotherapy that he had heard. He had been interested in the subject practically for only a year or so, but in that time he had observed between one and two thousand applications of the treatment in private and hospital work, and as the result of his experience it was difficult not to become enthusiastic. He had employed the treatment tentatively and partly for amusement and instruction in a variety of skin affections. Psoriasis he had seen disappear temporarily under its use. Chronic, indurated patches of lichen planus, especially about the limbs, he had seen melt away in a remarkable manner. Its results in epithelioma had been most satisfactory. He recalled one case on the lip, however, in which no improvement resulted, and he had seen a number of other cases of epithelioma in that region where it failed, probably because the tissues in that location were so lax and the blood supply so great.

With regard to measurement, he wished that some X-ray workers

would be a little more accurate in regard to measuring the strength of this remedy. In office work he always had recorded the exact distance from the target, the exact length of the spark, and the time of the exposure. He thought we were not yet prepared to give an accurate statement in regard to these important details. Dr. Duhring spoke of making the applications for ten minutes. He did not think many of his patients had been exposed for such a long period. He had never seen any serious results follow the application of the rays. We knew that an X-ray burn took a week or ten days to develop. He usually left an interim, at first, of at least a week between the applications, and before repeating the application the patient was always carefully examined in order to see if any injurious effects had occurred. The initial application was seldom over five minutes, with the target placed at four, five, or six inches. A close range combined with a short application was advisable.

There was another point, which was briefly referred to by Dr. White. The X-ray should not be used to the exclusion of other remedies. Of course, for experimental reasons we might choose to use it alone, but now that we knew its effects there was no reason why we should exclude other remedies, both external and internal.

Dr. F. H. Williams (by invitation) was grateful for the opportunity of listening to the excellent papers which had been presented and the discussion they had brought out. The subject was a large one, and he would attempt to touch on not more than one or two points.

With regard to skin diseases, it seemed to him that the X-rays were of great value, but at the same time the word of caution offered by Dr. White should be kept in mind, namely, that the treatment should be used with the greatest care. It was capable of doing harm, both in skin diseases and superficial new growths, and in private and hospital work he always cautioned his assistants not to take any risk.

As regards new growths, a part of his experience had been tabulated in the third edition of "The Röntgen Rays in Medicine and Surgery." One hundred and fifty cases were given in this table, which included cases of superficial new growths, larger growths, and breast cases. The X-rays were very valuable remedies in the treatment of superficial growths, though all cases did not yield to them, and in rare instances were aggravated by them. In the larger growths and in breast cases they were also helpful, usually stopped the pain and sometimes checked the growth, if they could not cure it. The treatment in some cases of new growths needed to be carried on for a long period of time; on the other hand, he had two cases of superficial new growths that yielded after two exposures.

The amount of this remedy which should be used was, he thought, a very important consideration. The terms "high" and "low" were frequently employed to describe the kind of tube that was required in a given

case, but we ought rather to measure the amount of light which was coming from the tube. This was the only basis for the intelligent use of the X-rays. By means of a very simple apparatus, which he had called a fluorometer, the amount of fluorescence which a given tube was capable of exciting could be readily determined, and this he assumed, for the present, to be a measure of the activity of the tube.

Dr. William A. Hardaway: While we all may be agreed as to the utility of the X-ray in malignant new growths of the skin, there was some legitimate reason to doubt its value in acne and various other forms of skin diseases. It was exceedingly valuable in the type of growth approaching the rodent ulcer. The dermatologist sees growths of that sort much more frequently than he did the deeper forms of cancer.

He had seen some remarkable results following the application of the X-ray, and carried away by the exceedingly enthusiastic reports of others, began to wonder whether he had not wasted a good many years of his life in studying dermatology since special knowledge was apparently no longer necessary. Since then, however, he had taken a much more moderate view of the value of the X-ray.

One point was not referred to by the speakers, and that was in relation to relapses. In two cases which he had treated, of very superficial epithelioma, a relapse occurred, in one instance within two months and in the other within three months after the disease had apparently disappeared. In another case of epithelioma of the cutaneous surface of the upper lip there had been at least three relapses within a year after apparent complete healing. The same was true of the treatment in psoriasis.

Dr. Bronson: There were one or two points he would like to refer to in connection with this subject. It was certainly, in more ways than one, the burning question in therapeutics. The X-ray had established itself as an agent of potency, but it was still in an experimental stage. There was a lack of precision in the application of that agent. Even in the papers which had been read, excellent as they were, there was a certain amount of vagueness in regard to dosage. That was a question of very great importance. It was the amount of irradiation that was the essential feature; the amount of the dose; the amount of the rays to which the part was exposed. In his opinion, this depended primarily upon the condition of the tube. He believed it made very little difference what the actuating element was, whether a static machine, or a high frequency apparatus, or a Ruhmkorff coil—what we wanted was the emission of these peculiar rays, and it did not make any difference how that was effected. The difficulty was to regulate and control the condition of the tube and in order to accomplish that we needed methods of greater precision. With that end in view, the French had suggested a variety of instruments—an *osmo-regulateur* that regulated the vacuum by osmosis,

a *spintermétre* that indicated the degree of resistance of the tube and a *radiochromométre* designed to ascertain the degrees of penetrability of the rays and somewhat similar to the one described by Dr. Williams.

A most important point related to the time and distance of the exposure. Undoubtedly there existed a more or less determinate ratio between time and distance. As stated by Codman the effect of an exposure (i. e., the amount of effective radiation) varied directly as the time and inversely as the square of the distance. In comparing different exposures he found it convenient to reduce them all to their equivalent in time for distances of one inch, for which he used the following equation, where T = time and D = distance: $T \div D^2$ = the equivalent in minutes at 1 inch. By varying this equation we might readily make any exposure in which either time or distance given conformed to some particular standard, as, for example, one in which the time was 10 minutes and the distance 7 inches. The equivalent time at 1 inch for this would be 0.2 of a minute. If distance was given then the equation would be $T = D^2 \times 0.2$, and $D^2 = T \div 0.2$. Let the distance be 3 inches, then T = 1.8 m. Let T be 5 minutes then $D^2 = 25$ and D = 5 inches.

Dr. Hartzell: Until the physicists tell us what we were administering, and furnished us with apparatus to tell us how we were giving it, we must limit ourselves to the effects of the X-rays. The time of the exposure must be determined by the effect we were producing. Indeed, that applied to many other therapeutic agents. The dose, which might be sufficient in one case would be insufficient in another, and too much in a third.

To add a word about the frequency of the applications. There seemed to be a great diversity of opinion as to the frequency with which the exposures should be made. Some applied it at intervals of two, three, or four days; others, less frequently. His own experience with the remedy was quite limited, but he was in the habit of giving short exposures daily until some reaction occurred, when the interval was lengthened. In the cases in which he had followed this method he had had no reason to regret it. He believed that it was entirely possible to get therapeutic effects without any of the disagreeable complications that sometimes occurred. While that was true, still it was not always possible to avoid the injurious effects of the rays, possibly because of an individual peculiarity in the patient, or a variability in the emission of the rays.

Dr. Frank H. Montgomery wished to endorse very heartily the statement made by Dr. Hartzell that up to the present time the only trustworthy measure we had for the therapeutic use of the X-rays was its effect on the patient. We all kept a record of the exact distance from the target, the duration of each exposure, and the character of the tube employed; but even with these precautions the results varied with each different apparatus. Although an operator established a measure by

which he could approximately control the dose from a given machine, the same formula would not apply to another machine. In Paris, some months ago, he saw several of the devices referred to by Dr. Bronson, but did not see them in active use. Even if we had the greatly desired means of accurately measuring the dose, it would, nevertheless, be necessary to use the reaction obtained in each case as a guide, as different individuals certainly varied greatly in their susceptibility to the influence of the rays. Dr. Hyde and he had encountered at least three cases in which that susceptibility was so very unusual as to amount to an idiosyncrasy. In Vienna he found that Dr. Freund was employing a hard tube, with a light so feeble that it was almost if not quite imperceptible in ordinary daylight. With such a light, he stated that he could give short daily exposures until the first evidence of reaction was apparent without danger of producing a burn. They had followed practically the same method for about six months with excellent results and without producing greater reaction than desired. Though they had had no bad burns, yet when using softer tubes they had had several cases of severe dermatitis which were very troublesome. For very superficial lesions, such as psoriasis, they used tubes of medium vacuum.

He would like to ask Dr. Pusey what his experience had been with the X-rays in the treatment of deep carcinoma of the lower lip. Dr. Hyde and he had had several of such cases, for which operation was refused, that apparently improved for a time, but later progressed much more rapidly under the influence of the rays than he believed they would have done had they been let alone. In three instances metastases occurred during the treatment of the original tumor. They believed the X-rays were not effective in the treatment of deep-seated carcinoma of the lower lip, but should be employed following the surgical removal of the tumor. In the treatment of superficial epithelioma about the forehead, nose, and cheeks, they had had no failures. In psoriasis, the lesions almost invariably disappeared promptly, and, they were beginning to believe, did not recur as early as after other methods of treatment. Recurring lesions certainly disappeared with fewer treatments than were required by the original. He recalled a case of inveterate psoriasis in a man of sixty, where the lesions had remained in the same locality for twenty years, during the last five of which he had been under the observation of Dr. Hyde and the speaker. After a few exposures to the X-rays the lesions disappeared and had not returned within a year. This was an unusually favorable result. In sycosis, the treatment had been in eight cases promptly and completely successful. In acne, they believed the X-rays furnished an ideal local treatment, especially for pustular forms, but they saw cases not infrequently in which, after the face had completely cleared by this treatment, there was a return of the disease. In general, Dr.

Hyde's experience and his own would endorse the excellent presentation of the subject by Dr. Pusey and Dr. Stelwagon.

Dr. F. J. Shepherd had seen a good many of these lesions produced by the application of the X-rays; they occurred usually in the course of skiagraphic work and not in the treatment of skin diseases.

He did not think the use of the X-rays should be advised in the treatment of the epithelioma of the lower lip. In such cases we were very apt to have a recurrence in the submaxillary region. The knife was a much better method in all cases where one could cut well around the diseased area. In epithelioma of the lower lip, a thorough surgical operation would entail not only excision of the lip itself, but also the glands in the submaxillary region. In the treatment of lupus he always curetted the lesion before applying the X-rays, and this, he said, hastened their disappearance.

There existed a great difference of opinion as to the dosage of the rays, and this was a very important detail of the treatment. Other unsettled points was the distance of the target, the length of the exposure and the character of the tube. Some preferred a low vacuum tube; others a high one. We should arrive at some definite rule regarding these unsettled points, and perhaps experience was the only way in which we could get at it.

Dr. Engman wished to place on record a case of epithelioma of the tongue coming under his care in which the X-rays were employed. The case was seen by two of his colleagues. The lesion was typical of epithelioma, although the diagnosis was not confirmed by a histological examination. The rays were purposely applied to the point of burning, producing a slough. The wound then granulated, forming a small scar, This was nine months ago, and there had been no signs of a recurrence thus far.

The other was a very bad case of axillary hyperidrosis. After quite a number of treatments, seventy or eighty, the hyperidrosis was checked to the extent of at least fifty or seventy-five per cent. He mentioned these two cases as he had not seen reports of similar ones.

Dr. Gilchrist said that he had made very frequent use of the X-rays during the past eighteen months. In acne, the first effect was a disappearance of the seborrhœa, and the skin became soft and velvety. The patulous openings of the sebaceous glands also seemed to get smaller.

With reference to the treatment of sycosis, he expected to show a patient on the following day who suffered from this disease in a very severe form, involving the entire bearded portion of the face. On one side of the face he performed epilation, followed by the application of pure carbolic acid to each pustule, and on the other he applied the X-rays. After a month's treatment the case was practically cured, although he still had one or two recurrent pustules on the area treated by the old

method. A comparison of the two methods of treatment showed plainly the superiority of the X-rays over epilation and the use of carbolic acid.

He had used the X-rays quite extensively in chronic eczema, and in one case of lichen planus with excellent results. In the treatment of superficial cancers and rodent ulcers he curetted the lesions in order to get rid of the excessive growth of tissue. By doing this they at once exposed the basal tissue, which was more easily destroyed by the X-rays. In a case of disease of the orbit, somewhat similar to the one reported by Dr. Pusey in his paper, the condition toward the end apparently failed to improve under the use of the rays, but upon removing a section, there was found, on microscopical examination, an entire absence of epithelial growth. The rays seemed to have a selective action on the epithelial overgrowth, causing it to undergo distinct destruction, while the other tissues offered much more resistance.

As regards the dangers attending the use of the X-rays, he reported a case of severe X-ray burn some years ago. That patient still had a periosteitis and an osteitis of the bones of the right hand as the result of his burn. The burns, as Dr. Shepherd had already mentioned, chiefly occur in the course of skiagraphic work. He recalled one fatal case due to an X-ray burn over the abdomen, and Dr. James C. White had recorded a case of epithelioma developing on the site of an X-ray burn. With the careful use of the rays in dermatological work, however, no serious accidents had been reported.

Dr. A. P. Biddle wished to report an unfortunate occurrence in his office last week. While using the coil, with a twelve-inch spark, the tube suddenly exploded, badly cutting the assistant's face. He had no explanation to offer. The current was not turned on at the time.

He had under observation a young lady who was a pronounced brunette, and in her case the X-ray treatment for acne produced marked pigmentation.

He would like to ask Dr. Pusey how he treated epitheliomatous lesions involving the mucous membrane on the inside of the mouth and with what success.

Dr. L. C. Pardee: In regard to epitheliomata resulting from X-ray burns, he would like to ask both Drs. Pusey and Stelwagon whether there had been any histological examination made in any of those cases.

He had seen a number of severe X-ray burns, some of which lasted quite a considerable time. Two of them were brought to him after various antiseptic applications had been ineffectually tried. He found that by treating them with an ordinary wet boric acid dressing until the superficial slough had fallen off and then applying one of the newer preparations of hæmaglobin which were intended originally to be given internally, they healed up very rapidly.

The President, Dr. John T. Bowen: In continuing the discussion

wished to refer very briefly to the work done by his colleagues and himself at the Massachusetts General Hospital during the past year.

Summary of Results,
X-ray Treatment,
Massachusetts General Hospital,
Boston, Mass.
1903.

Disease treated	Number healed.	Number not benefited.	Number benefited but failed to continue treatment.	Number at present under treatment.	Total number treated.	
1. Epithelioma	27	..	9	19	55	
2. Carcinoma with subcutaneous involvement	.	4	..	..	4	
3. Keratosis senilis	11	..	4	2	17	
4. Tuberculosis — Lupus	11	..	2	2	15	22
4. Tuberculosis — Verrucosa	1	..	..	..	1	
4. Tuberculosis — Scrofuloderma	3	..	2	1	6	
5. Sarcoma—multiple round cell of skin	.	1	..	..	1	
6. Folliculitis	8	..	2	2	12	
7. Eczema	5	..	..	2	7	
8. Psoriasis	6	..	2	..	8	
9. Varicose ulcer	2	1	..	1	4	
10. Cellulitis (leg)	.	1	..	..	1	
11. Varicose dermatitis	1	..	1	..	2	
12. Acne	2	..	..	..	2	
13. Hypertrichosis	2 (permanent?)	..	..	..	2	
14. Alopecia areata	.	2	..	..	2	
15. Erythema induratum	1	..	..	..	1	
16. Scleroderma	.	1	..	..	1	
17. Hyperidrosis	.	1	..	..	1	
18. Ainhum	.	1	..	..	1	
Totals	80	12	22	29	143	

Fifty-five cases of epithelioma were treated. Of this number twenty-seven were discharged, healed, with no evidence of the disease left but the scar; nine progressed favorably, but failed to continue treatment, and nineteen were at present under treatment, reacting favorably.

Each case was treated at an average interval of twice a week, such changes being made in each case as seemed advisable, either on account of

the susceptibility of the patient or the reaction of the particular tube used at the time.

Epitheliomata of the rodent ulcer type all reacted favorably with great constancy to the rays. Nodular non-ulcerative lesions had not responded well to treatment unless previously cauterized or curetted.

Carcinomata below the skin and even lesions which had become deep by infiltration from the skin had given uniformly negative results. No radical benefit has been observed in the large number of cases of cancer of the breast treated at the Massachusetts General Hospital, although there was frequently temporary relief to pain and some improvement in the general condition of the patients.

No return of the disease had been seen in cases of epithelioma discharged healed. There were at present under observation several cases which had been treated from eight months to a year. One case showed a soft scar of the cheek of thirteen months' duration.

Eleven cases of lupus were healed, and as far as could be judged at present, cured. In all these cases the desired benefit did not begin until a decided dermatitis of the exposed area occurred. The reaction was usually accompanied by considerable pain, marked redness of the skin, and after a few days beginning sloughing of the lupus tissue. After varying periods of time, from a few weeks to months, depending upon the extent of the disease and its resistance to treatment, the lupus areas were replaced by cicatrices which were of the character of most scars following X-ray treatment—soft and smooth.

Three cases of scrofuloderma healed rapidly, and in one case was followed by great improvement in the general health of the patient. One case of verrucous tuberculosis of the buttock was cured.

Eight cases of folliculitis of the beard had been healed under the rays. No case attempted had failed to improve. Two relapses had been observed, one after two and the other after six months. Several of the cases with intense pruritus of the affected areas had had that symptom entirely controlled. In several cases the treated portion of the beard fell, but in no case was the alopecia permanent, although frequently return did not begin for six or eight weeks.

Six cases of psoriasis were treated. All the cases attempted had come to the clinic for a long time, and were not benefited by other methods of treatment. Two cases had, after a great many exposures, been completely healed. One of the above mentioned cases had been cleared nine and the other six months without return. In the other cases treated only portions of the body were cleared sufficient to ascertain the efficacy of the rays in each case.

The cases of eczema treated that were healed were chronic cases with more or less epidermic thickening. Five cases were entirely relieved of this disease.

Eleven cases of keratosis senilis were successfully exposed.

Several cases of varicose ulcer of the leg healed rapidly under exposure to the rays.

Among the diseases treated unsuccessfully were: Cellulitis of the leg, hyperidrosis, erythema nodosum, alopecia areata, sarcoma cutis, scleroderma and ainhum.

Patients with localized lesions had been protected by means of lead foil covered on either side with adhesive plaster, in which an aperture had been cut corresponding to the size of the lesion exposed. This protection had in all cases been sufficient, no evidence of reaction over protected skin having been seen. Diffuse lesions, as psoriasis, had usually been treated with only the head protected when it was in range.

No harmful X-ray dermatitis had been observed in this series of cases.

Low vacuum tubes had proven most successful for cutaneous use. Tubes showing black bones of the hand with the fluoroscope at a distance of a foot had been most satisfactory. An induction coil of twenty-inch spark capacity with a current of 1½ to 3 amperes had been used throughout the work.

Dr. Bronson: Another point of practical importance in the use of the X-rays was whether it was better to follow the method of certain authorities who began the treatment with what might be called a minimum dose and gradually increased it, or, to adopt that of those who began with the maximum dose and gradually lessened it. Considering the well known cumulative effect of successive exposures the latter plan seemed the more rational one.

Dr. Stelwagon: (Closing the discussion). As regards the dosage, that could only be gauged by experience and observation. We could say what the spark gap was—the distance from the patient,—and the time of the exposure, and that was all we could say. We could not say what that patient was getting. Much depended upon the character of the machine employed; the degree of the initial vacuum limited the value of the spark gap as a gauge. We did not, in fact, know what the active element was. He questioned very much whether it was the rays, and as long as we were in ignorance regarding that, how could we measure the dosage excepting by actual experience and observation? In his opinion, the only way was to begin with the minimum dosage, and give a short exposure at the full distance. Furthermore, we had the individual idiosyncrasy to deal with. What might be a small dose in one case might be a large dose in another. It was much the same as with sun-burn. He thought it was a good idea to ask each patient whether he or she was easily affected by the sun's rays. His general experience had been that a low vacuum tube was more valuable than a high vacuum one in the treatment of cutaneous diseases. The bad burns he had seen were invariably produced by high vacuum tubes in skiagraphic work.

As to metastases following the application of the rays in cases of cutaneous malignant growths, he thought the question was open to doubt as to whether the metastases were actually caused by the rays. We knew that in certain cases of carcinoma metastases would occur with or without the application of the X-rays. We must consider how many of these cases had been treated with the rays in recent years, and in how comparatively few instances metastases had been reported, certainly not in a larger number relatively than observed where the disease was let alone or otherwise managed.

Dr. Pusey: (Closing the discussion). Dr. Stelwagon and he did not undertake to cover the entire subject in their papers. It would have occupied a good part of the entire time of the meeting to fully discuss the use of the X-rays.

As to the dosage, he fully agreed with Dr. Stelwagon that it was largely a matter of personal equation. For a long time he had not paid as close attention to the quality of his tubes as some of the speakers. He believed the effects were due to the X-rays themselves, and he thought those effects could be produced with a tube of medium or low vacuum as well as with a tube of high vacuum. He was extremely cautious in the use of tubes of low vacuum, because he had seen the most untoward results from them. He used a middle-aged tube, one that was slightly worn and produced a moderate quantity of X-rays with a medium amount of penetrability.

He would not undertake, without extreme caution, to treat any disease with the X-rays merely for cosmetic purposes. In the treatment of eczema, he proceeded with much caution, and stopped immediately at the first evidence of a reaction. In treating epithelioma he did not hesitate to push the treatment, and get up a reaction as quickly as possible. He had never had a necrotic burn, nor a slough. Repeatedly he had carried the exposures to the point of producing a vesicular dermatitis, but never a slough. He attributed this to the fact that in his technique he employed a weak light, and he would not, under any consideration make use of the amount of X-rays which was ordinarily employed by those who did skiagraphic work.

He had not found it necessary to resort to any method to protect the operator, because he did not use enough light in his "shop" to be diffused over the room. He had never personally had an X-ray burn, nor had any of his assistants. He thought the most mischievous thing we did was to constantly test the light with the hand. He had recently seen advocated a piece of gauze impregnated with carbonate of lead as a protection to the hand. The material he preferred was lead with a slight admixture of tin and covered with green paper. This was moulded into shape with holes cut to expose the necessary areas.

As regards the production of freckles by the use of the rays, he

had noticed that this phenomenon occurred most readily in persons who freckled easily. In fact, the changes in the skin were very similar to those produced by sun-burn.

In the treatment of malignant growths he had been very careful in the selection of cases. He had been unwilling to take cases of carcinoma unless they had first been passed upon by a surgeon or the family physician, and the patient had positively refused operation. He believed we should not advise this treatment in any case of carcinoma where a surgical operation would include the removal of contiguous glands. In a number of cases of cancer of the lower lip, with involvement of the glands in the neck, he had not seen any lasting benefit follow the use of the rays. We were not justified, except in epithelioma, in using the X-ray to the exclusion of other and better established methods, but at the same time the results of surgical methods in those cases did not give the surgeon the right to assume a superior attitude. He had never seen an instance where the X-rays had increased the size of a malignant growth. He had seen very few relapses, and those were slight, such as one might have had after the use of a caustic application, or in the ordinary course of events.

THE ROENTGEN RAYS IN DERMATOLOGY.

By Edward Bennet Bronson, M.D.

Read before the American Therapeutic Society, at Washington, D. C., May 12, 1903.

COMPARED with the achievements in phototherapy, at least those reported from Copenhagen, the results of treatment with the Röntgen rays are still in the experimental stage. Of the Finsen light, we know pretty definitely the effects and the effective agent, and positive results have been established statistically. Of the Röntgen radiations the actual nature is unknown, their action imperfectly comprehended and statistics of results obtained by them in disease, notwithstanding their widespread employment, are still meager and lack conclusiveness.

That in the X-rays we have a more potent agent—certainly of greater potency for harm—than in the chemical rays of the Finsen light, there can be no doubt. Of its potency for good no one can be in doubt who has witnessed the effects—effects sometimes almost magical—in severe ulcerating carcinoma, for example; in the quick subsidence of pain; the disappearance of fetor; the cleaning of the surface; the reduction of nodular infiltrations; the apparent healing

effect, and certainly the relief of discomfort, if not the prolonging of life; in the curative effects in rodent ulcer, in lupus vulgaris, in lupus erythematosus; its ability to remove hair permanently as well as temporarily; the therapeutic effects in psoriasis, in keratosis of the palms and soles, in certain forms of eczema, nævus, warts and other superficial diseases; nor should be forgotten the remarkable effects produced in Hodgkin's disease.

And then there is the reverse side. When one has seen the truly horrible effects that may follow the reckless use of the rays—the so-called X-ray burns that may last for many months, or even years, not only with revolting disfigurement but with a torture of pain almost incessant,—it is enough to give one pause. What harm excessive irradiation may do is shown in a hideous case described by Solomon.[1] The patient, a lady, had been treated for lupus of the head and face a year before. The exposures had been carried to an excessive degree almost beyond belief, part of the time to the combined radiations of two tubes and continued long after inflammatory reaction had set in. The scalp was denuded of hair; both the scalp and face were covered with scars, ulcers and telangiectases; moreover, there was a condition of scleroderma so that in places the surface was hard as alabaster. The thickened lips projected, the stiffened eyelids could be but partly closed, the ears had grown to the side of the head; both hearing and sight were sadly impaired, and, strange to say, withal, lupus tubercles were still in evidence. It is possible, however, that the latter were due to a recent infection.

Scleroderma as an effect of the X-rays has been observed by others. Solomon refers to cases of Barthélemy and Behrend. Another serious accident is the occasional occurrence of epithelioma on surfaces often exposed to the rays, as on the backs of the hands; and instances of severe carcinoma as a result of Röntgen irradiation have been reported. An effect on the hair growth after exposure to the rays seems to indicate that the action may include a stimulation as well as degeneration of cell growths. It is often noted after the effluvium of the hair produced by X-rays that the succeeding growth is more vigorous, the hair is thicker and sometimes darker than before. In hypertrichosis, when radiotherapy has been begun and stopped short of causing fall of the hair, and afterwards recourse is had to electrolysis, the hair will often be found to be more resistant where the part had been irradiated than elsewhere. But there is no agent of

[1] Solomon. Ueber sclerodermieartige Hautveränderungen nach Röntgenbestrahlung. *Arch. f. Derm. u. Syph.*, LX., 2, p. 263.

great energy for good that has not some countervailing dangers or disadvantages. It is only a question of proper adaptation.

In radiotherapy, the most obvious and imminent danger is the burn, though by no means so serious as it was at first. Though severe burns still occur every now and then they are of far less frequency than in the early days of Röntgen irradiation. Codman,[2] in a study of the reported cases of X-ray dermatitis, states that in 1902, at the time of his writing, the chance of a severe burn was only one in ten thousand cases. He adds: "Obviously this makes the case against a physician charged with causing such an injury very hard."

By a severe burn we may understand one that causes gangrene of the sound tissues. Slight burns causing erythema and pigmentation are not rare nor of especial importance, and in treating the deeper-seated affections like lupus or cancer, a much more severe reaction up to gangrene of the diseased tissue may not be objectionable. Healing takes place within two or three weeks, even in the latter case, without the production of unsightly scars. But the difficulty is to control the reaction so as to produce just enough and not too much effect.

Unfortunately our knowledge of what produces the effect, whether pathological or therapeutic, is only vague and indefinite. Many theories have been advanced, but few have held. One was that the effect was due to bombardment through the tube and into the tissues of metallic particles from the target, but according to Tesla it would take hundreds of years of such bombardment before there could be a sufficient collection of metallic particles to effect any tissue changes. Tesla's ozone theory has been discarded. It accounts neither for the delayed nor the deep-seated effects produced. Ultra-violet rays were supposed to account for them, but ultra-violet rays could not pass the glass walls of the tubes, and the physical properties and behavior of ultra-violet rays and X-rays are totally unlike. It has been supposed that the electricity that collects about the tube, escaping in brush discharges, is the cause of the effects. But as pointed out by Morton,[3] "there is no burning of a part exposed to the dark hemisphere of the tube"; and furthermore it is a matter of common observation that the burn will be absolutely prevented by a lead screen, whether grounded or not. On the other hand, an aluminum screen that is not impenetrable to the X-rays but will cut off the electrical discharges, does not prevent burns. (Oudin.) It should be remembered, too, that it

[2] Codman. A study of the cases of accidental X-ray burns hitherto recorded. *Phila. Med. Journ.,* March 8, p. 912, March 15, p. 499.

[3] Morton. The treatment of malignant growths by the X-ray. *Med. Record,* March 8, 1902, p. 364.

is not the tubes of high resistance and requiring strong current that are most likely to produce burns, but the soft tubes with weak currents. Again, burns which appear to be of identical nature occur from Becquerel rays, where electricity, so far as we know, is not concerned.

It is still believed by some authorities that while the tissue changes cannot be attributed to electrical discharges from the tube, they may, however, be related to the well-known property of the X-rays of discharging electrically charged bodies. Thus Bordier (cited by Freund), referring to the fact that in the phenomenon of osmosis there is a difference of potential on the two sides of the membrane through which the fluid passes, states that exposure to the rays retards the process, probably by changing the potential of the two sides of the diaphragm, and that this retarding influence is not prevented by interposing a grounded aluminum screen between the tube and the membrane. This disturbing influence on electro-capillary phenomena might explain many of the biological and therapeutic effects of radiation. Moreover, according to Freund,[4] the mere disturbance in the electrical equilibrium of the tissue molecules would account in part for the tissue changes.

The pathological effects of Röntgen radiation are for the most part confined to the skin. The changes effected on the interior are comparatively insignificant. Notwithstanding the extraordinary penetrating power of the rays, and in spite of the fact that it is possible for evidences of trophic reaction to occur not only in that part of the skin nearest the tube, but also occasionally in the skin on the opposite side, corresponding with the point of emergence for the rays, all the intermediate tissues remain apparently unaffected.

Kaposi is of the opinion that the Röntgen rays act on the blood-vessels in the deeper parts of the cutis, in the same manner as strong sunlight, and cause hyperæmia, at first acute, then passive, which, little by little, extends to the more superficial vessels. Doutrelepont also, speaking of the reaction in lupus, refers the first effect to hyperæmia, which is accompanied by an abundant emigration of leucocytes from the vessels and causes an infiltration resembling that seen from the action of tuberculin, especially about the lupus nodules, forming later fusiform cells and fibrillar connective tissue that gradually replace the lupus tissue undergoing degeneration. Schlotz[5] assigns a more

[4] Freund. Grundriss der gesammten Radiotherapie für praktische Aerzte, Berlin and Wien., 1903, pp. 267, 268, 269.

[5] Scholtz. Ueber den Einfluss der Röntengenstrahlen auf der Haut in gesundem und krankem Zustande. *Arch. f. Derm. u. Syph.*, LIX. pp. 87, 121

important part to the cell changes in the Röntgen reaction. First the epithelial cells undergo degeneration, and later, usually in less degree, the cells of the glandular organs, the vessels, the muscular and connective tissue. It is only after the cellular degeneration has reached a certain stage that the vessels begin to suffer and signs of inflammation appear.

The factors of greatest importance in the production of the reaction are:

1. The susceptibility of the individual.
2. The condition of the tube.
3. The distance of the exposed surface from the focus of the rays.
4. The duration of the exposure.

1. There is no obvious reason why the susceptibility of different individuals to the X-rays should not vary as much as the susceptibility to sunburn. Blondes are said by some authorities to be more susceptible than brunettes, though others doubt this. Certainly the pigment of the skin does not interfere with the penetration of the X-rays in anything like the degree it does with the sun's rays or with the Finsen light. A previous pathological condition of the skin, however, has a decided influence on the susceptibility. The reaction is much greater on a surface affected by lupus or even with such a trifling disease as rosacea than on healthy skin.

With the ability to regulate the action of the tubes so as to maintain a uniform radiation, both as to intensity and penetrability of the X-rays, many writers believe that the personal equation of the patient would be a relatively negligible quantity. This is the opinion of Kienböck, for example. Barthélemy[6] says that when twelve patients were exposed to the rays under identical electrical conditions, and with the time and distance the same, there were absolutely identical trophic changes, regardless of the temperament, age or complexion of the patient or the condition of his skin. Codman, on the other hand, attaches much more importance to the condition of the individual, the dryness or dampness of the skin, its electrical resistance, the chemical reaction of the sweat, vasomotor irritability and the like. But these elements of variation may seem less important when we have succeeded in better controlling the production of the rays.

Much difference of opinion prevails with regard to the relative efficacy, as well as safety, of hard and soft tubes. Formerly Schiff and Freund advocated the use of hard tubes only, but Freund at least

[6] Barthélemy. *Ann. de Derm. et de Syph.*, Jan., 1902, p. 61.

has modified his opinions in this respect, mainly as a result of the demonstrations of Scholtz. French authorities generally prefer the soft tubes. Certainly a quicker and, as now generally admitted, an intenser reaction is produced by tubes of a moderately low resistance than by tubes of high resistance. There is little question that burns are more readily caused by low than by high tubes, and probably a speedier therapeutic effect, at all events in the more superficial affections. The higher tubes, however, having greater power of penetration, are thought better adapted to the deeper-seated affections.

The simplest way to ascertain the condition of the tube, whether hard or soft, is by observing the fluorescence within the tube. If the tube be soft, the light will appear yellowish and brilliant; if the resistance be still less, a little violet light will appear, especially about the cathode disc; but this usually soon disappears. If the tube is hard, the fluorescence will be of a greenish hue, or pale and watery-looking. Corresponding to the greater penetrability of rays emitted under the influence of high tension, with the fluoroscope the bones and other tissues show varying degrees of translucency. With high tubes the bones cast only a faint shadow, with low tubes they appear black.

Various devices have been used, both with the object of regulating the condition of the tube and of affording greater precision in observation. After a more or less prolonged use, the resistance of the tube tends to increase. The small modicum of air that remains after the first exhaustion is in some way partially absorbed or expelled. The fluorescence thus appears in zones and splashes of light on the walls of the tube, instead of a uniform glow of the anterior hemisphere. To reduce the vacuum again some device is used to introduce a gas or vapor usually from some substance that may be volatilized by heat and is placed in a little chamber connecting with the vacuum cavity and provided with a projecting rod or tube to which the heat may be applied. The French favor an arrangement by means of which hydrogen gas may be introduced into the tube by osmosis and known as the *osmo-regulateur* of Villard. It consists of a platinum tube that pierces the vacuum tube by its inner extermity, while the closed outer end projects outside. When the flame of a lamp is applied to it sufficiently to bring it to a red heat, the platinum becomes porous and permits the hydrogen of the flame to traverse it and enter the vacuum tube. On cooling, the platinum becomes impervious again.

Two other so-called instruments of precision which French authorities consider useful are the *spintermétre* of Béclère and the *radio-*

chromométre of Bénoîst. The former is a guaged spark-gap for determining the resistance in the tube and the latter is a screen composed of a very thin disc of silver surrounded by graduated thicknesses of aluminum, and is used with the fluoroscope to ascertain the pentrating power of the rays.[7] Freund does not consider these last two devices of much practical utility.

Certain it is that the intensity of the irradiation outweighs all other considerations. Whatever means are used to actuate the tube, whether static machine, Ruhmkorff coil or high-frequency apparatus, the effective agent is precisely the same; viz., the so-called X-rays. The amount of effect depends on the amount of radiation to which the affected part is exposed. The most important questions, then, after regulating the condition of the tube, relate to the distance of the exposed surface from the focus of the rays and to the duration of the exposure. The effect may be said to vary directly as the time and inversely as the square of the distance (it being assumed that the law as to intensity that applies to ordinary light also applies to the X-rays). Granting this to be true, we may easily compare exposures of varying time and distance by reducing them, as suggested by Codman, to their equivalents in time at the distance of one inch. Thus, if T = time in minutes and D = distance in inches, then, according to the above law, $T \div D^2 =$ time equivalent for one inch. Let the time be 10 minutes and the distance 6 inches, the time equivalent for one inch is then 0.28 ($10 \div 6^2$) of a minute. Various calculations with regard to time and distance may be made in a similar way. Suppose we wish to make an exposure conform to some particular standard such as the one given above, but in which the time and distance are not the same, we use the following equations:

$$D^2 \times .28 = T$$
$$T \div .28 = D^2$$

Let the distance be 3 inches. Then $3^2 \times .28 = 2.52$, the required time in minutes. Let the time be 5 minutes. Then $5 \div .28 = 17.8$, which is the square of the distance, and the distance, therefore, would be 4.44 inches.

Hence, 2½ minutes at 3 inches and 5 minutes at 4.44 inches are each equivalent to .28 minutes at one inch, or 10 minutes at 6 inches.

If the law as stated above were absolutely true, these calculations would seem to be perfectly reliable. It is not by any means certain, however, that short exposures at short distances are just the same in

[7] Beclére. Les mesures exactes en radiothérapie. *Ann. de Derm. et de Syph.*, Jan., 1902, p. 60.

effect as long exposures at long distances. Codman is of the opinion that variation in the distance is an element of greater importance in the exposure and attended with more danger than is the variation in the time. But even if the formula is only approximately correct, it is very useful for purposes of comparison and much better than mere guesswork. On the basis of this formula Codman institutes a comparison between a large number of exposures from which injury has resulted, reducing them all to their equivalents in minutes at the distance of one inch, and finds that no exposure that amounts to less than .05 minute at one inch has caused a burn. This being the extreme limit, and probably implying an idiosyncrasy, a therapeutic standard exposure would lie well outside this limit. The standard which he suggests is 10 minutes at 6 inches, which would correspond to 0.28 minutes at one inch. This must be regarded as a major therapeutic dose, and intended for cases where a decided effect is desired. It certainly would be a strong dose for frequent repetition. A standard that better accords with general experience would be 10 minutes at 8 inches (equivalent to 0.156 minutes at one inch).

Next comes the question as to the number and strength of the succeeding exposures. The question is rendered more complicated by the fact that the effect of successive irradiations is cumulative, at least in the sense that when a sufficient exposure to produce a certain effect has been made, if before this effect has declared itself—before the period of incubation has passed—other exposures are made, the ultimate effect will be an exaggerated one. If the first exposure alone only sufficed to produce a therapeutic effect, the effect of the added irradiations may be a burn. To avoid such a result directly contrary methods are employed by different authorities. Thus Oudin[8] begins with a very weak exposure—what may be termed a minimum dosage of the rays—and then gradually and at rather short intervals proceeds to exposures of longer and longer duration. But the distance always remains the same, viz., 10 cm. (4 in.) from the target. The first exposure is one minute and at each subsequent sitting the duration is increased by 30 seconds until some reaction is produced. When the reaction has disappeared he resumes the exposures with three minutes less duration than the last, and goes on increasing the time as before, though in superficial affections the duration is never allowed to quite reach that which caused the first reaction.

On the other hand, Scholtz (l.c., p. 424), beginning with a max-

[8] Oudin. Considerations sur la radiothérapie, *Annales de Derm. et de Syph.*, Jan. 1902, p. 54.

imum exposure which for superficial affections would be 15 minutes at 30 cm. (12 inches), and for deep-seated ones like lupus, 10 minutes at 15 cm. to 20 cm. (6 to 8 inches), the succeeding exposures are made shorter and shorter and at longer and longer intervals, the distance remaining always the same. A few days before the first maximum exposure, a comparatively mild irradiation is made as a test for any possible idiosyncrasy of the patient, especially if the case be a superficial one, such as acne, trichophytosis barbæ, hirsuties or eczema. During the first week in such a case the duration of the exposure is reduced from 15 minutes to 6 or 7 minutes, and in the second week to 4 or 5 minutes, and the intervals are increased. In treating lupus, it is his object to produce an inflammatory reaction as soon as possible, at least in the lupus tubercles, which always react more intensely than the surrounding skin. In lupus he considered a slight gangrenous effect that is confined to the lupus tissue as not objectionable.

Freund[9] and Schiff pursue a different plan and more like that of Oudin. The first exposure is at 15 cm. (6 inches) and the time 5 minutes. At the subsequent sittings the distance is gradually diminished to 5 cm. (2 inches) and the period of exposure increased to 10 minutes, using hard tubes. More recently, however, Freund has adopted Schlotz's plan of using soft tubes, beginning with shorter distances and longer periods of exposure, followed by weaker exposures.

Kienböck's method[10] is more severe. He uses tubes that are "soft" or "medium soft." The tube must give a light that will traverse the thorax of an adult at a distance of 1 to 2 meters For therapeutic purposes the tube is placed at an average distance of 20 cm. (8 inches) and the exposure is continued for from 5 to 20 minutes, in most cases 10 to 15 minutes. Such an exposure is repeated daily during three to five days. The treatment is then suspended for about two to three weeks, awaiting the reaction. The severity of this method lies not in the dosage at the first sitting, but in the daily repetitions of the same dose.

Possibly the variations of method as illustrated in the above examples are no greater than obtain in the employment of many other therapeutic agents, and yet they leave on the mind an impression of uncertainty, of lack of precision, which in view of the possibilities of danger of this particular agent is a sufficient admonition to caution. There are similar variations in the application of Röntgen rays in the

[9] Freund. Loco. cit., p. 203.

[10] Cited by Freund, loco. cit., p. 203.

treatment of particular diseases. Thus in the treatment of lupus there is what may be called the escharotic method that aims at a speedy destruction of the lupus tissue and courts a decided inflammatory reaction, and the more conservative method of Freund, who, by milder and more often repeated exposures, seeks to effect more gradual changes and to replace the lupus growths by slow formation of new connective tissue. Whatever germicide power the rays may have, it is admittedly too insignificant to be considered.

There are also marked variations of methods in treatment of superficial affections in the removal of hair, in acne, eczema, keratosis and psoriasis, for example. It is a comparatively easy and safe procedure to cause temporary fall of the hair by the X-rays, but to insure their permanent removal in hypertrichosis is quite another and much more difficult matter. Some follow the severer methods of Kienböck, of Scholtz, or that of Oudin, already referred to, while others prefer the more conservative plan of Freund. Zeissler, who follows Kienböck with slight modification, refers to very satisfactory results in hirsuties and reports thirty-four successful cases of acne of different varieties. Pusey also reports good results, but following the method of Freund. Freund states that the hairs fall out at the end of from twenty to twenty-five sittings. In from six to eight weeks a new growth appears, to forestall which at intervals of from four to six weeks the treatment is repeated for a few sittings; and this is continued till finally the hairs cease to grow, the whole course requiring from twelve to eighteen months. By more energetic treatment the periods may be somewhat lessened, but at the best it affords little advantage so far as duration of treatment is concerned over electrolysis. In favorable cases the results are superior to those of the latter method in the absence of pain and in the avoidance of scars, and would in every way be superior but for the constant menace of a "burn."

In treating broad, flat surfaces affected with superficial diseases, such, for example, as psoriasis or keratosis of the palms or soles, large areas may be included at one irradiation and without the troublesome screen, if at a considerable distance from the target (say at twelve inches or more), the difference in intensity between the peripheral and central rays under such circumstances being only slight; though much the same effect may be produced at shorter range by frequently changing the patient's position so that the central rays shall not act long upon any one spot.

That in many skin diseases Röntgen irradiation is a remedy of great value, at least as an adjuvant to other therapeutic measures, is

a fact sufficiently established, but in very few instances is it likely to supplant entirely the older methods of treatment. No measure requires greater circumspection in its employment or a nicer adjustment of many details; and whatever be its promises for the future, it must be admitted that for the present it is a comparatively unknown quantity, and still in the experimental stage.

NEW YORK DERMATOLOGICAL SOCIETY.

314th Regular Meeting, May 26, 1903.

OSCAR H. HOLDER, M.D., President.

A Case of Lupus Erythematosus. Presented by Dr. H. G. Piffard.

The disease had existed for five years. The man came under treatment on April 2, and came twelve times that month. For the first three times the ultra-violet lamp was used for five minutes; then twice for ten minutes, and for the last seven times it was used for fifteen minutes. The infiltration, Dr. Piffard said, had pretty well disappeared, and while the case was by no means well, he wished to show what improvement had been made. At the Finsen Institute thirty-eight cases of lupus erythematosus had been treated up to July, 1900, of which twelve had been cured, thirteen had discontinued treatment and thirteen were still under treatment. Sixty-two cases of lupus erythematosus had been reported as having been treated by high frequency, of which thirty-three had been entirely cured, seven had discontinued treatment and fourteen were still under treatment. Eight received no benefit. From this it would appear that the high frequency treatment was somewhat superior to photo-therapy. The speaker said he had tried terminals of iron, steel, electric carbon, graphite, aluminum and cobalt, and the iron had been found the most effective.

DR. BRONSON called attention to the fact stated by Finsen, Bang, Strebel and other authorities, that in photo-therapy it was not so much the ultra-violet rays that were effective as the more penetrable blue-violet rays. Of the ultra-violet rays, only a third were capable of penetrating the epidermis. It was the chemical rays as a whole, the visible more than the invisible, that were effective in these diseases, at least that occurred below the epidermis. Such lamps, thus far, depended solely upon their richness in ultra-violet rays for their effect could have but a limited range of usefulness.

As to the use of adrenalin by cataphoresis as demonstrated so prettily by Dr. Piffard while it certainly served very perfectly to ex-sanguinate the part, it was a question whether its repeated employment

might not be attended with some risk to the blood-vessels. As was well known, it had occasionally given rise to stenosis and gangrene.

Dr. C. W. Allen said that many of the cases he saw treated in Paris had compression kept up for an hour at a time.

Dr. Piffard said with regard to the difference between the effects of the low tension and the condenser spark, that if the lesion were purely superficial the condenser spark would probably be the more satisfactory; if the lesions were deeper, the ultra-violet rays would not penetrate and one must use the low tension arc in which the ultra-violet rays were less abundant than the blue-violet. Formerly Finsen made use of glass lenses, which would not permit any effective quantity of ultra-violet rays to pass through, and found that when he substituted quartz that it was possible to reduce the exposures considerably. This seemed to be a strong argument in favor of the efficacy of the ultra-violet rays, If the spray were used, there was an electric bombardment together with violet rays and some ultra-violet rays. In addition, there was a development of ozone, and possibly ionization and some other effects. It was, therefore, very difficult to say just what element in the treatment was responsible for the good results observed. A short time ago he had seen a case of lupus vulgaris that had been under treatment for two years by one of the gentlemen present. He had made use of the ultra-violet rays on two occasions and was already able to note some improvement. He was now treating another case of lupus vulgaris of twenty-years' standing which had been under the care of a member of this society, but relinquished treatment because an operation was advised. He had used the lamp on this case a dozen times on one portion of the lesion and had noticed a decided diminution in the thickness of the part treated as compared with the neighboring parts. Certainly the high frequency currents used in the electric spray were very remarkable in their effects. If used without the resonator, however, the effects were very different, although good.

Dr. C. W. Allen said his experience with this lamp was very slight as yet, so that he could not make any definite report upon it. The case of lupus erythematosus involving the lower lip and the vermillion border and the mucous membrane, shown by him at a recent meeting, had been steadily improving. He had seen the modified Finsen treatment as employed in Paris, and so far as he could judge, they were unable to get along with short sittings if good results were to be attained, and they also found it necessary to make pressure of some kind. He had seen some patients who had been cured of lupus vulgaris and some that had been almost cured. A variety of different lamps was being used there. The high frequency current was also being used in a large number of skin diseases, including pruritus ani, and they reported better results than from the other methods.

Dr. Piffard said he had seen this spring two of the worst cases of lichen planus that had ever come under his observation. One of them was an Armenian woman, who had the disease pretty nearly all over her body. The effect of the hyperstatic current had been very good, and after a few times, when the patient called his attention to the fact that he had overlooked treating certain areas that had been covered by her undershirt, he was surprised to observe, on comparison, the good effect of the current. She had been treated twice a week for about a month. He had never found anything else so useful in lichen planus as this high frequency current.

Dr. Piffard said that at the present time he made very little use of the spark.

Dr. Sherwell remarked that he had known cases of rapid recovery from chronic lichen planus of the most aggravated kind—one such just occurred to him, in which the patient had been referred by him to Dr. Crocker of London. The individual on a long and protracted voyage, attended in her case with great sea-sickness, was about well at the time of arrival in London. Other almost equally grave and persistent cases, had made phenomenally rapid recoveries under alkalies and anti-rheumatic treatment.

Dr. Allen asked Dr. Piffard if he now employed longer sittings than formerly.

Dr. Piffard replied that he always tested the susceptibility of the individual at the beginning, and it was because of the susceptibility of the patient presented by him this evening that he had made use of the sittings already mentioned.

Dr. C. T. Dade said that he had been treating a case of lichen planus for six weeks with the protoiodide of mercury without the slightest benefit. He mentioned this because it was a method that had been much lauded in this affection.

Dr. G. H. Fox said that lichen planus ran such a very variable course that it was difficult to decide upon the therapeutic effects of special methods of treatment. His experience had led him to think that mercury was the best of the internal remedies for this disease. A strong solution of carbolic acid would relieve the itching, but beyond this he believed there was no other inflammatory disease in which local treatment accomplished so little as in lichen planus. When he heard about cases of acne, psoriasis, lichen planus and lupus vulgaris being cured by new methods of electrical treatment, he was doubtful whether the result could not as readily be attained by other methods, but he confessed to being a convert to the X-ray treatment of certain skin diseases, particularly of keloid and keratosis, which could not be successfully treated in the usual way.

CONSIDERATION OF FORMER CASES.

Folliclis.

Dr. E. B. Bronson said that this case had markedly improved. There were, at the time of presentation, a number of lesions on the scalp, forehead, behind the ears and upon the legs. When last seen by him there were not more than three lesions requiring any attention. She had had the disease since childhood. The treatment had been cod-liver oil internally, and locally the occasional application of kresamin with nosophen between times.

Iodipin Eruption.

Dr. H. G. Klotz reported that this case was practically well now.

Hyperæmia of the Face.

Dr. Klotz said that he had examined this woman again and had found no irregularities of digestion or menstruation. He had recently treated her with spray of a five per cent. solution of antipyrin in water, and she had improved very decidedly. He had used this application quite extensively as an antipruritic with good effect.

A Case Presented for Diagnosis, Thought to Be Lupus Erythematosus.

Dr. H. H. Whitehouse said that some months ago he had presented this case, occurring in a woman. There were some lesions upon the face which had lasted for about a year. The lesions were absolutely devoid of scales and resembled an erythema multiforme, but because of the duration of the disease the diagnosis of lupus erythematosus had been made. She had been put on pills of iodoform, one grain, three times a day, and in the course of a few weeks the lesions had disappeared. He had seen her again recently and had found that the patches had returned and were as bad as before. She had received no local treatment.

Dr. G. H. Fox referred to a case coming to him recently with an eruption resembling a zoster in location. It was upon the left breast and side, and examination showed it to be lichen planus. He then learned that previously a physician in Paris had diagnosticated lichen planus in this patient, at a former time when the eruption was along the spinal column—a decidedly unusual distribution in each attack.

ABSTRACTS.

The Iron Arc Light Versus the Carbon Arc Light. G. Busck. (*Dermat. Zeitshrft.*, 1903—X—178.)

Busck is an assistant in the Finsen laboratory, and undertakes to refute the statements of Prof. Kromayer, abstracted in a recent number of The Journal of

Cutaneous Diseases. He shows that the Finsen light produces a reaction in 8 seconds, the Bang lamp in 10 seconds, and the Dermo lamp in 40 seconds, and that therefore the last lamp is five times weaker than the Finsen light. In the Finsen Institute every exposure is an hour and a quarter long, so as to produce a deep effect of the light for its bactericidal action and its aptitude for the destruction of pathological cells. In order to test the bactericidal activity of the Dermo lamp it was used with a current strength of 15 ampéres and directed at a distance of 4 cm. upon a culture of bacterium prodigiosus for 5 minutes. It had no effect upon the bacteria. The Finsen light killed the bacteria in a few seconds. It took 3 minutes with the Dermo lamp to affect a piece of photographic paper laid between two bloodless ears of a rabbit; the Finsen light produced the same effect in 3 to 4 seconds. It is not only light, but abundant strong light that cures lupus, and this is produced in a far greater measure by the Finsen apparatus than by any other. With the new Finsen-Reyn apparatus the same light is produced as by the older apparatus. It requires only 20 ampéres instead of 80, and can be used with the usual electric lighting plant.—G. T. J.

Adrenalin Chloride in Purpura Hemorrhagica. Dr. Fred M. Kinsey. (*Memphis Medical Monthly,* 1903—Vol. XXIII—259.)

The patient was seen in the fourth attack of a typical purpura, associated with uterine hemorrhage, hemoptysis, and oozing from the gums and mouth; the eruption was general. Twenty-drop doses of 1-1000 adrenalin chloride solution were ordered every four hours. Recovery was prompt; all hemorrhagic conditions being controlled in twenty-four hours.—Isador Dyer.

Case of Xerosis—Ichthyosis Type Dr. Randall Hunt. (*N. O. Med. and Surg. Jour.,* Vol. LV—711.)

Child of six. Disease present since sixth week; progressive in the atrophic changes, going on to practical deformities, ectropion, etc. The face has become senile, the hair sparse and the disease universal; in places tending to acanthoses; treatment inefficacious.—Isadore Dyer.

A Study of the Syphilis Bacillus. Drs. Max Joseph and Piorkowski. (*Berliner Klinische Wochenschrift,* March 24, 1902.)

After unsuccessful attempts to discover a micro-organism in lesions and in the blood of syphilitic patients, the authors directed their attention to the semen, basing their investigations on the assumption that there is ample clinical evidence to sustain the belief that the semen of syphilitics contains the micro-organism which is the cause of syphilis.

Semen from twenty-two syphilitic patients was inoculated upon normal placental tissue, after assuring themselves that it could be rendered sterile and hence was a safe culture medium to employ; the results were uniform and striking. Staphylococci developed within twenty-four hours, and their place was quickly taken by a characteristic growth of bacilli.

The bacillus is plump in form, usually knobbed at one end; it resembles the diphtheria bacillus, and is the size of the subtilis bacillus. It stains well with carbolfuchsin and gentian violet and poorly with methylene blue.

Metachromatic granules, which are supposed to have something to do with the virulence or avirulence of bacilli, were found in the poles of the bacilli by the use of special stains.

Primarily, the bacilli will only grow on placental tissue, but succeeding colonies develop on agar.

It was never found in the semen of healthy individuals, nor was it found in the semen of those suffering from late syphilis. Inoculations into swine were

undertaken and gave uncertain results. A future report of its discovery in chancres and in secondary lesions of syphilis is promised.—H. G. Anthony.

A Case of Atrophy of the Skin after the Use of X-Rays. H. E. Schmidt, (Prof. Lesser's Clinic). (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 15.)

The writer's case belongs rather to the class of diseases called by Kaposi dermatitis atrophicans than to the category of idiopathic atrophy of the skin, as in this case slight inflammatory changes preceded the atrophy.

The patient exposed his right hand to the action of X-rays for experimental purposes for half an hour's duration. Three weeks later he noticed the exposed part of the hand getting red and gradually changing into a darker color till it turned into a dark red color and remained so. The inflamed part was never moist, but the skin became thinner. The production of sweat in the affected part was not diminished. On the finger bones thickenings developed. This condition remained unchanged for the last five years. The skin upon the metacarpal bones of the right hand was of a livid color, very much thinned and folded "as rumpled (ruffled) cigarette paper." The veins and tendons of the muscles were prominent. The affected area was sharply defined from the healthy skin. The sense of touch, pain, heat or cold, was not changed. The ends of the joints of the phalanges were slightly thickened.—Lapowski.

A Case of Disseminated Adenoma of the Sweat Glands with the Formation of Cysts. Theodor Brauns (Prof. Riehl's Clinic). (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 347.)

The material for investigation was obtained from a corpse which, during life, was affected with tabes and progressive paralysis. The disease was in existence for many years. The changes were visible upon the trunk, breast, abdomen and inguinal region. The tumors were the size of a walnut, scattered without symmetry. No marks of infiltration or inflammation or ulceration were present.

Microscopical examination proved the tumors to be congenital adenomata of the sweat glands with secondary formation of cysts. The writer could not find in literature a similar case.—Lapowski.

NEW JOURNAL.

La Syphilis is the title of a new French monthly edited by Dr. T. Barthélemy to be devoted entirely to this special field of medicine. The first number contains an original article on syphilis of the stomach by Prof. Alfred Fournier; a clinical lecture on the same subject by Prof. Diculafoy; a general program by the editor outlining the plan and scope of his new work; clinical lectures by Gaucher and Brocq; a department for brief notes on cases which in themselves might be considered of too little value to be published but which in the aggregate would be of great value to special investigators; a department for correspondence in which replies are requested to a number of debated questions, such as "double infections," conceptional syphilis as regards the mother, pigmentary syphilides of the neck, etc.; a department of therapeutics and society proceedings, especially societies for venereal prophylaxis; and finally a special abstract and bibliographical department. We offer our best wishes for the success of *La Syphilis*. May it accomplish much towards

the prevention and cure of a disease which "although venereal in its manner of approach is not so in its manifestations." By boldly adopting as title a name so often shunned or stigmatized with moral obloquy, a long step is made towards placing syphilis beside leprosy and tuberculosis as one of the great plagues of mankind and with them fully entitled to a special organ.

BOOK REVIEWS.

Report of Twelve Thousand Cases of Skin and Venereal Diseases. (Prof. Finger's Ambulatorium für Haut und Geschlechtskrankheiten im K. K Allgemeinen Krankenhause in Wien.). By Drs. Karl Pezzoli and Alex Porges. (Franz Deuticke, Vienna, 1903.)

The careful tabulation of such a large number of out-patient cases, treated during a period of nearly twenty years, is not only a tribute to the industry of the authors, but should be an example to be followed in every out-patient dispensary. If the attending staff in an out-patient clinic do not regard the material of sufficient interest to justify the time and labor required in making such tabulated reports, these clinics should be reorganized for the benefit of the profession at large, so that such an enormous amount of material for study should not go to waste. If statistical reports of all the out-patient dispensaries in New York City were made after the plan of the report before us, the patients would be greatly benefited by the more accurate diagnoses for tabulation, while the quality of the scientific work done would be immensely superior.

In this report the authors give first, a tabulation of diseases under the headings of skin, syphilis, blennorrhea, ulcus molle, and non-venereal genito-urinary affections. Second, a consideration of the statistical percentages. Third, a study of the therapeutic methods employed in the various groups of diseases, especially newer remedies. Fourth, special consideration of rare and interesting cases, with histopathological findings.

To give a few figures, there were 5,277 cases of skin diseases; of which eczema constituted 26.9 per cent.; acne 8.22 per cent.; psoriasis 4.17 per cent.; urticaria 3.79 per cent; herpes tonsurans 3.6 per cent.; erythema multiforme 3.54 per cent.; impetigo contagiosa 2.5 per cent., etc.

It is curious that only one case of mycosis fungoides was reported. There were 1,130 cases of syphilis reported, of which 33.8 per cent. were primary, 32.8 per cent. secondary, 23.5 per cent. recurrent secondary, 9.1 per cent. tertiary and only .06 per cent. hereditary. Only fifteen cases of extra-genital infection and only one case of malignant syphilis were reported. In all, there were 4,357 cases of blennorrhea of which 79.5 per cent. were acute uncomplicated, 19.6 per cent. were chronic urethritis with only 2.5 per cent. having strictures. Ulcus molle counted 3.8 per cent. of the total.

Naphthalan seemed to have given good results in a number of affections; it was especially recommended in nearly all varieties of eczema. This remedy was especially rapid in healing impetiginous eczema of the scalp, scabies, herpes tonsurans, impetigo contagiosa circinata and in acne. In lupus erythematosus the frequent application of Hebra's mixture of equal parts of sulphuric ether and absolute alcohol was found very beneficial. It is quite evident that X-ray and Finsen ray have not taken possession of Finger's Ambulatorium, as good

results in lupus vulgaris are still obtained with the fine pointed Paquelin cautery. In the treatment of syphilis the authors prefer to wait for the secondary rash before beginning the chronic intermittent method. Inunctions are given if the time and occupation of the patient are not opposed. In severe cases, deep intramuscular injections of calomel; but the favorite method was, undoubtedly, deep intramuscular injections of the salicylate of mercury, which in thousands of injections had never been followed by an abscess. The portion devoted to the treatment of genito-urinary diseases is recommended to those especially interested in this subject, as our space limits will not permit further detail.—A. D. M.

System of Physiologic Therapeutics. By S. Solis-Cohen. Vol. V. *Prophylaxis, Personal Hygiene, Civic Hygiene, Care of the Sick.* P. Blakiston's Son & Co. Philadelphia. 1903.

A work covering so extensive a field in so few pages must necessarily be brief in the consideration of each subject, but less than five pages is here devoted to the prophylaxis of venereal diseases. This is totally inadequate considering the gravity of the sequelæ of gonorrhea and syphilis; a gravity which has aroused Europe to the holding of two congresses at Brussels and more recently the German congress at Frankfort for the sole purpose of considering the prophylaxis of these diseases. At least one practical suggestion of these meetings should be emphasized; viz, to increase the number of dispensaries and facilitate the sterilization of these diseases by means of treatment. The education of the victims by means of printed instructions handed out at the dispensaries, as has been practiced for years at the Hôpital Ricord in Paris, and recently advocated in New York by Cabot, would do much in the way of practical prevention. Another field of prophylaxis barely mentioned is the systematized medical inspection of school children. The previous neglect of this field has led to the great spread of trachoma in the New York Public Schools and against which the New York Health Board is now waging such an effective warfare. Almost no mention is made of the contagious scalp affections caused by the trichophytons. In Paris the prophylaxis of these distressing affections has been centralized in an admirable special hospital and dispensary as well as the enforced inspection of all children sent to institutions, to guard against epidemics of ringworm. More stress should have been laid upon the hygienic measures which should be enforced upon barber shops and manicure establishments. On the whole the volume has much to commend it upon the subjects treated.—A. D. M.

Progressive Medicine. Vol. I., March, 1903. Lea Bros. & Co., Philadelphia and New York.

This volume of *Progressive Medicine* considers in its usual discriminating style the latest developments in the departments of surgery of the head, neck and chest, infectious diseases including acute rheumatism, croupous pneumonia and influenza, diseases of children, pathology, laryngology, rhinology and otology. The chapter on diseases of children fails to mention any progress in the study of the skin affections of children; if, however, these affections are to be considered later under the heading of dermatology, the criticism falls. The section devoted to pathology (over one hundred pages) including recent contributions to the study of cytotoxins, agglutins, precipitins, bacteriology, etc., is edited with great discrimination and care and is most suggestive for research work along the most promising lines of activity in medicine. These quarterly digests fill a want in these times of voluminous contributions to medical literature, being edited by recognized authorities, the reader is saved much labor in culling the good from the bad.—A. D. M.

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SOME PRECANCEROUS AFFECTIONS OF THE SKIN, MORE PARTICULARLY PRECANCEROUS KERATOSES.

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Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

A SMALL number of diseases of the skin, after existing for a longer or shorter period as benign affections, exhibiting neither the clinical nor the histological features of malignancy, terminate in epithelioma. This termination, although far from being the rule, occurs in a sufficient number of cases to exclude the probability of mere coincidence, and to warrant the application of the term pre-cancerous to such affections. These diseases do not belong to a single pathological group, but include inflammations, neoplasms, hypertrophies, and such alterations of the skin as may result from previous disease or injury.

Hardy held the opinion that there was a certain relationship between eczema and cancer, asserting that if a certain number of those affected with cancer be carefully questioned it will be found that most of them have previously been the subjects of eczema; but this is a very slender foundation upon which to base such an opinion, since, owing to the very large number of those who at some time or other in their lives suffer from eczema, the association of these two affections can be most easily explained as mere coincidence. Bazin believed that psoriasis likewise predisposed to carcinoma, an opinion which apparently has some foundation, since a number of cases of this affection in which cancer followed have been reported by a number of observers in different parts of the world; but these cases probably belong to another group, the precancerous keratoses, to which we will refer later.

Some years ago Volkmann called attention to a peculiar inflammation of the skin occurring in workers in tar and paraffin, which showed a special predisposition to be followed by carcinoma, reporting a number of cases. Later Tillmanns, Liebe, Schuchardt, and others reported cases of a similar kind. This paraffin dermatitis is a multiform inflammation of the skin characterized by red, oozing patches resembling eczema, by psoriasiform lesions, and follicular inflammation resembling acne, beginning acutely or coming on gradually. After a time the skin becomes dry and fissured in places; the mouths of the sebaceous gland-ducts are widely dilated and filled with blackish masses; crusts composed of corneous epidermis and sebaceous material form beneath which the skin is superficially ulcerated and bleeding, and wart-like growths appear which later fall off or undergo carcinomatous degeneration. Usually there is marked hyperplasia of the epidermis, diffuse or circumscribed, in the latter case occurring as small horn-like projections, or flat elevations which Volkmann compared to drops of wax, such lesions being found chiefly upon the hands, forearms, scrotum and perineum. The predisposition to this paraffin dermatitis varies greatly with the individual, some workers becoming so severely affected immediately that it becomes necessary for them to give up the occupation, while others appear to be entirely immune. Cleanliness exerts a marked effect in preventing the inflammation even in those predisposed.

Ackermann, who examined the skin of the scrotum from one of Volkmann's cases in which carcinoma had occurred, found that, even in places remote from the carcinoma, such histological changes were present as needed but a trifling increase to present the anatomical characters of carcinoma. Tillmanns found that the skin affected by paraffin dermatitis showed everywhere atypical epithelial proliferation, epithelial pegs going down into the deeper parts of the skin, together with proliferation of the cutaneous glands.

Almost a century ago Percival Pott described a form of cancer —the so-called chimney-sweep's cancer—which followed a dermatitis of the scrotum due to the irritation of soot, which was very like, if not identical with, the paraffin dermatitis of Volkmann. It is of great interest to note in this connection that Rayer, writing of chimney-sweep's cancer, refers to a similar affection occurring upon the scrotum in smelters of arsenical ores.

Lupus vulgaris is, in a small proportion of cases, followed by epithelioma; and while the whole number of cases is not large, it is sufficient to establish a more than accidental relationship between these

two affections. Desbonnets, in a monograph upon lupus and epithelioma, has collected ninety cases of lupus, reported by thirty-seven observers, one observer alone reporting six, in which epithelioma occurred. According to this author, the epithelioma may develop in the scar-tissue of an old lupus, or in the lupus tissue itself. It does not differ in any essential particular from other varieties of epithelioma, but according to most authors its course is usually more rapid than the primary forms, and the prognosis is accordingly more unfavorable.

Other forms of cutaneous tuberculosis, such as tuberculosis cutis verrucosa, may terminate in epithelioma. Some years ago I reported the case of a woman, 67 years of age, in whom a typical verrucose tuberculosis, situated upon the flexor surface of the forearm, after a years' duration, became epitheliomatous, necessitating the amputation of the arm.

In view of the very great disturbance in the growth of the epidermis in tuberculosis of the skin, it is not remarkable that epithelioma sometimes follows. The interpapillary processes of the rete are frequently enormously increased in length, growing deeply into the corium in all directions and presenting appearances resembling epithelioma.

Pringle very recently has reported a case of long-standing erythematous lupus of the scalp followed by multiple epithelioma, and refers in his paper to four other cases, one by Riessmeyer, one by Dyer, and two by Stopford Taylor. Holländer, Lassar, and Kreibich have each reported a case of this disease followed by epithelioma; and some years ago I had the opportunity to observe a similar one. Such a termination, however, is far rarer in lupus erythematosus than in lupus vulgaris.

The ulcerating lesions of tertiary syphilis, in rare instances, become the seat of cancer. Lang and Doutrelepont have both reported cases of this kind, the latter having observed three, in all of which the syphilitic character of the early lesions was demonstrated by the results of specific medication, and the later occurrence of carcinoma being confirmed by the microscopic examination of the excised lesions.

New growths of the skin, congenital or acquired, after a longer or shorter duration as benign affections, may undergo cancerous change; warts and the pigmented nævi showing the greatest tendency to such a metamorphosis. The frequency with which such transformation takes place is considerable. Of 223 cases of carcinoma of the extremities collected by Rudolf Volkmann, 23, or a trifle more than ten per cent. had their origin in congenital or acquired warts. In this

connection it may be observed that a considerable number of so-called pigmented nævi which become carcinomatous are in fact not congenital growths (if the statements of patients are to be believed), but have appeared some time after birth. In such cases it is often difficult, if not impossible, to determine whether or not the growth was cancerous from the beginning.

As has long been known, the pigmented epithelioma originating in the pigmented nævus, correct notions of the histo-pathology of which we owe largely to the work of Unna and a member of this Association, Dr. Gilchrist, is among the most malignant of the new growths. The disease usually runs a rapid course; widespread metastases are common, and recurrence after removal is almost certain.

The chronic leg ulcer serves as the starting-point for carcinoma of the lower extremities in a very considerable proportion of cases. In the paper on cancer of the lower extremities by Volkmann, already quoted, more than ten per cent. of the entire number—223—began as leg ulcer.

Cicatrices arising from any cause, but more particularly those resulting from burns, are prone to become the seat of cancer. This is very strikingly illustrated by the interesting statement made by Maxwell, that in the Vale of Cashmere epithelioma is endemic, the number of cases in one year at the Mission Dispensary being 1.24 per cent. of all diseases treated. Of 54 cases 27 were upon the abdominal wall, and 15 upon the thigh, unusual situations for this disease. The great prevalence of the malady, and its unusual situation are attributed to the frequency of burns in the regions most affected. The natives are in the habit of carrying braziers filled with burning charcoal beneath their clothes, in contact with the skin of the abdomen, and burns are frequent. The cicatrices from these often become the starting-point of epithelioma.

Various forms of circumscribed keratosis, such as cutaneous horns, callosities, the palmar and plantar lesions resulting from arsenical poisoning, and senile keratoma form an important group of precancerous affections.

The corn-like lesions of the palms and soles which in a considerable number of cases follow the prolonged therapeutic use of arsenic, more rarely resulting from acute arsenical poisoning, and which in a small number of instances have served as the starting-point for epithelioma, are among the most interesting of the keratoses, since in these we have a well-defined pathological process, due to a well-known and definite cause, leading up to the formation of carcinoma. In most cases this

variety of keratosis appears as a disturbance of cornification only, but occasionally it is preceded or accompanied by redness, burning, and other evidences of inflammation, which disappear after the establishment of the keratosic lesions. I wish especially to call attention to the fact that in a considerable proportion of cases marked hyperidrosis precedes the appearance of the keratosis. Mr. Hutchinson states that he has known marked sweating of the palms follow the use of arsenic; and Pringle has reported two cases of arsenical keratosis of the palms preceded by sweating. As was pointed out by Erasmus Wilson, so long ago as 1873, the lesions in palmar and plantar keratosis are situated about the mouths of the sweat-ducts.

Although arsenical keratosis is usually the result of chronic poisoning with arsenic, it may, in exceptional cases, come on quite acutely, after the administration of comparatively small quantities of the drug. Mackenzie has seen it appear in thirteen days after the beginning of arsenical treatment, but two and one-third grains of arsenious acid having been taken. Moreira has reported two cases of accidental poisoning with arsenical rat-poison in which dry, hard points appeared at the orifices of the sweat glands of the palms and soles, in one within eleven days, in the other within fifteen days after the ingestion of the poison.

Since Mr. Hutchinson first pointed out that arsenical keratosis may be followed by epithelioma, a number of cases in which this has occurred have been reported. A few years ago I had the honor to report such a case to this Association, and since the reading of that paper at least one other case has been recorded. Geyer, in a most interesting paper upon the changes induced in the skin by chronic arsenic poisoning, calls attention to the marked tendency of the so-called arsenic warts to be transformed into epithelioma, and refers to no less than six cases in which such transformation took place, reported to him by the physicians in a single district, Reichenstein, where a considerable number of the inhabitants suffered from chronic arsenical poisoning induced by arsenic-containing drinking-water. In view of the facts, it can scarcely be doubted that a close relationship exists between arsenical keratosis and epithelioma.

The most frequent, and perhaps the most important form of precancerous keratosis, the one to which the term precancerous is most applicable since it is followed in so large a proportion of cases by epithelioma, is that seen so frequently in the face and on the hands of adults past fifty years of age, the so-called senile seborrhœa, *acné sebacée partielle, acné concrête* of French authors, the senile keratoma

of Besnier, a name much to be preferred to any of the preceding. It occurs as pin-head to dime-sized, more or less elevated, friable and slightly greasy, or dry and hard, yellow brown, or black crusts which are firmly adherent to the skin. When forcibly removed the under side of these crusts shows numerous small spines, which have filled the dilated mouths of the follicles, and the skin beneath is moist and red, sometimes slightly bleeding, or not infrequently superficially ulcerated. There are usually no subjective sensations. The regions affected are, in order of frequency, the forehead, the upper part of the cheeks, the nose, the back of the hands, the sides of the neck, and the ears. It is most common in those engaged in manual labor, or in those whose occupation exposes them to the weather, and is consequently far more frequently seen in men than in women.

The course of the disease is variable. Many of the patches remain practically unchanged for months or years; a few are gradually transformed into superficial epitheliomatous ulcers which slowly enlarge, or, becoming more elevated and wart-like, sometimes with a thick, horny covering, present all the characters of a papillomatous epithelioma.

Notwithstanding its great frequency, and its well-known tendency to terminate in epithelioma, one seeks in vain in most text-books of dermatology for any account of its clinical features and pathology. So far as I have been able to learn, Schuchardt, in a paper on the origin of carcinoma from chronic inflammatory conditions of the skin, was the first to describe the microscopic changes present in this affection, which he calls senile seborrhœa. He describes the enormous increase in thickness of the corneous layer of the epidermis, and the inflammatory exudate in the upper part of the corium, but states explicitly that the sebaceous glands presented nothing abnormal, although there was evidence of retention of secretion on the hair follicles. He concludes that the disease is not limited to the sebaceous glands, although he thinks that an anomaly of secretion of these structures is probably the essential and primary trouble, notwithstanding his failure to find any microscopic evidence of it.

By far the best, and indeed the only adequate, account of this variety of keratosis is that given by Dubreuilh, in a paper on circumscribed hyperkeratoses presented at the International Congress of Dermatology held in London in 1896. He rejects the names employed by most French authors, preferring that proposed by Besnier, senile keratoma, as better indicating its true nature.

During the past year or two I have studied material derived from

five patients, in all of whom the keratosis was associated with epithelioma, one presenting no less than three epitheliomatous lesions. Lesions were excised, during life, from the face and back of the hands, and fixed and stained in the usual way. In all there was a marked increase in the thickness of the corneous layer of the epidermis, the nuclei of the cells being still present as fairly well stained slender spindles. The greatest increase in thickness was about the mouths of the hair-follicles and the sweat-ducts, the former being widely dilated and filled with horny plugs. The granular layer had in most places completely disappeared, but was still well preserved about the hair-follicles and the openings of the sweat-ducts. The rete mucosum presented considerable variation in the amount of the alteration present. In the newer lesions there was but slight increase in the width of this layer, although there was always evidence of increased cell-activity in the basal cells, such as numerous dividing cells and multiplication of nuclei. In the older lesions there were all degrees of increase in the thickness of the rete up to actual invasion of the corium and beginning epithelioma. In a small lesion removed from the cheek of the patient with multiple epitheliomata there was a circumscribed down growth of the rete surrounded and penetrated by a cellular infiltrate composed of numerous mononuclear leucocytes, and in the corium, a moderate number of plasma cells and "mastzellen." This evidently represented beginning epithelioma.

With the exception of a decided flattening out, and in some cases the complete disappearance of the papillæ, the corium presented but little alteration.

In a depressed lesion with a very tightly adherent crust removed from the back of the hand, the central portion showed a decided thinning of the rete, evidently a pressure atrophy, but the marginal portions presented the usual widening.

As to the glandular apparatus, the sebaceous glands showed absolutely nothing abnormal. It is true that in a lesion taken from the cheek they seemed somewhat larger and more abundant than usual, but as they vary greatly in size and number under normal conditions, this was not regarded as pathological. (Fig. 1).

On the other hand the coil-glands and their ducts showed pathological changes in every case. (Fig. 2). In a lesion removed from the back of the hand the upper part of the sweat-ducts, just before they entered the epidermis, was surrounded by an abundant cellular exudate. In lesions taken from the cheek the coil-glands showed marked proliferation of the lining epithelium with increase in the size of the cells, so

that the lumen of the tubes was frequently obliterated; other parts presented cystic dilation with flattening out of the lining epithelium. (Fig. 3). In fact, such change was so uniformly observed in the sweat-gland apparatus that we are led to the conclusion that these structures probably play an important rôle in this form of keratosis, a conclusion further supported by the fact that in other forms of circumscribed keratosis, more particularly arsenical keratosis, marked hyperidrosis sometimes precedes the appearance of the keratosic lesions.

REFERENCES.

1. Hardy. *Traité des Maladies de la Peau*, p. 723.
2. Volkmann. *Beiträge zur Chirurgie.*
3. Tillmanns. *Deutsche Zeitsch. für Chir.*, 13, 1890.
4. Liebe. *Schmidt's Jahrbücher*, 236, 1892, p. 65.
5. Schuchardt. *Volkmann's Sammlung, Chirurgie*, Nos. 54, 84.
6. Pott, Percival. *Chirurgical Works.*
7. Rayer. *Diseases of the Skin.* Edited by John Bell, p. 267.
8. Desbonnets. *Epithéliome et Lupus.*
9. Hartzell. *Jour. of the Amer. Med. Ass'n*, April 16, 1898.
10. Pringle. *Brit. Jour. of Dermat.*, January, 1900, p. 1.
11. Holländer. *Dermat. Zeitschr.*, Bd. 7, Hft. VI., p. 962.
12. Kreibich. *Arch. f. Dermat. u. Syph.*, Bd. 51, 1900, p. 347.
13. Doutrelepont. *Deutsche Med. Wochenschr.*, Bd. 13, 1887.
14. Volkmann, Richard. *Volkmann's Sammlung*, 334, 335.
15. Maxwell. *Hirsch's Handbook of Geographical and Historical Pathology* (New Sydenham Society's translation), Vol. III., p. 685.
16. Hutchinson. *Archives of Surgery*, Vol. III., p. 72.
17. Pringle. *Brit. Jour. of Dermat.*, Vol. III., p. 390.
18. Wilson, Erasmus. *Lectures on Dermatology*, 1873.
19. Mackenzie. *Brit. Jour. Dermat.*, Vol. VIII., p. 137.
20. Moreira. *Ibid.*, Vol. VII., p. 378.
21. Hartzell. *American Jour. of the Med. Sciences*, Sept. 1899, p. 265.
22. Geyer. *Arch. f. Dermat. u. Syph.*, Bd. 43, p. 221.
23. Schuchardt. *Loc. cit.*
24. Dubreuilh. *Ann. de Dermat. et de Syph.*, Tome VII., Troisiéme Série, 1896, p. 1180.

PLATE XL.—To Illustrate Dr. M. B. Hartzell's Article.



Fig. 1. Keratosis about mouths of follicles.

PLATE XLI.—To Illustrate Dr. M. B. Hartzell's Article.

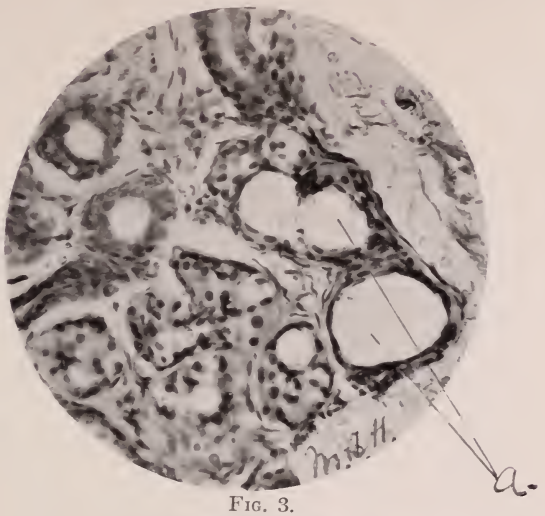


Fig. 3.

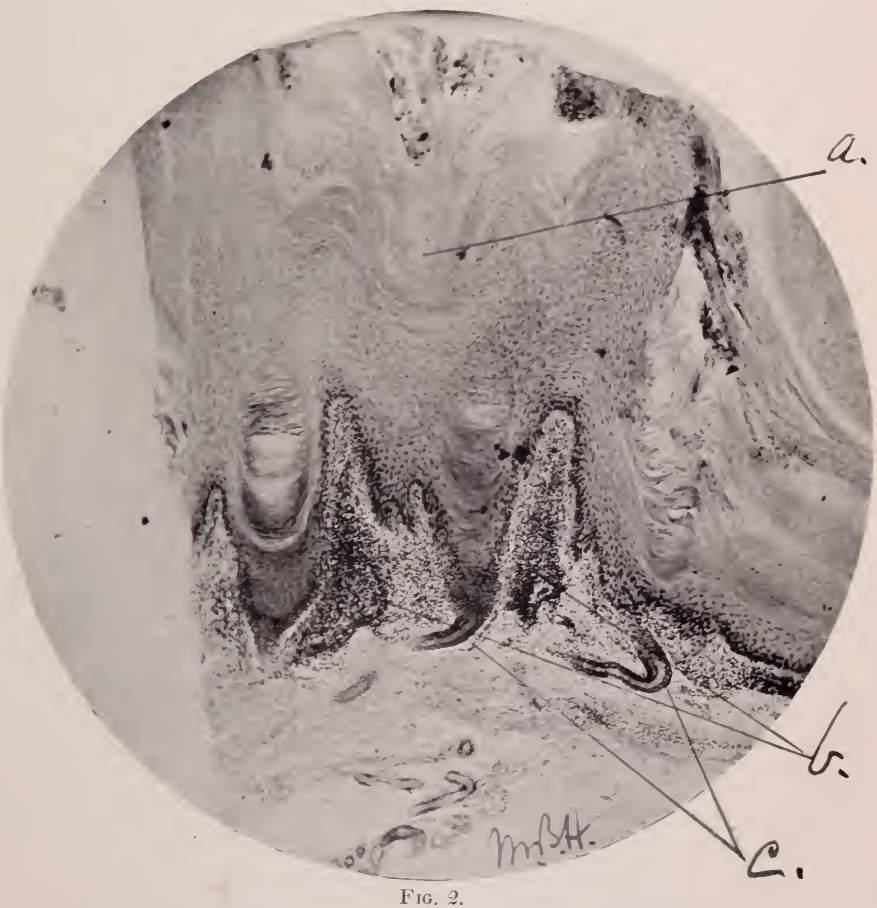


Fig. 2.

Fig. 2. *a.* Marked keratosis about mouths of sweat-ducts. *b.* Cellular exudate about sweat-ducts (*c.*)

Fig. 3. *a.* Dilated coils of sweat-gland.

DISCUSSION.

Dr. James C. White mentioned three cases of epithelioma following the course of prolonged psoriasis in which there were keratosic tissue changes. They might be put in the class of arsenical dermatoses.

He would also like to add to Dr. Hartzell's list a case of X-ray dermatitis in a young person: the dermatitis was very prolonged and was followed by the development of epitheliomatous changes, finally necessitating amputation of the hand.

Dr. Pusey said that Dr. White had referred to another precancerous condition which we must consider: the condition of chronic X-ray irritation. Last summer he saw a number of cases of chronic X-ray dermatitis in X-ray workers. The hands were particularly affected, and the condition so strongly resembled a pre-cancerous senile keratosis that he was led to prophesy that in some of the cases an epithelioma would develop.

Recently he had the opportunity of studying a remarkable case of chronic X-ray dermatitis in a man who manufactured the apparatus for producing the rays. He was burned from the middle of the trunk upwards, and the lesion resembled xeroderma pigmentosum. There was marked atrophy of the skin, a great increase in the number of freckles, marked telangectiases all over the body, and many senile keratoses. Since then this man had developed epithelioma, for which his hand had been amputated. Dr. Bowen, in the January (1903) *Journal of Dermatology,* had called attention to this same thing, and some one else had also recently referred to it, so that evidently its occurrence was not so very rare. He thought it was an exceedingly interesting point, as bearing upon the etiology of cancer. The essential feature in xeroderma pigmentosum was that we had a skin that was inherently hyper-sensitive to the actinic rays, and partly as the result of its efforts to resist the effects of these rays we had the proliferation of the epithelium that resulted in carcinoma. In the cases of X-ray dermatitis we had a normal skin which was repeatedly exposed to this form of radiant energy, produced by the X-rays; this increased the activity of the skin and in its efforts to resist the rays practically the same combination of symptoms as in xeroderma pigmentosum was produced. Here, he thought, we had an illustration of a carcinoma produced probably without the influence of any micro-organism.

Dr. Stelwagon thought that in the book literature on this subject there was a singular dearth of facts bearing upon these cases. He had seen a number of cases of cancer following these lesions of the skin, and had been interested in their prevention and further progress. We knew that they might often exist for many years without showing any danger symptoms, while in other cases they might undergo perceptible epitheliomatous changes. In the early stage, their progress could usually be checked by the use of salicylic acid or sulphur applications. They

had in Philadelphia two or three examples of chronic X-ray poisoning in which there were decided keratoses that pointed suspiciously towards the development of epithelioma.

Dr. Engmann thought that sunlight had a good deal to do with the development of senile keratoses. These lesions occurred most frequently in exposed parts. A case seen recently was in a woman about fifty-five years old, whose arms were the seat of a number of lesions resembling Kaposi's disease, but upon section they proved to be acanthomatous. The woman had been in the habit of wearing dresses with short sleeves. Since protecting the arm, the condition has greatly improved. It occurred to the speaker that they were due to the irritation of the sunlight.

Dr. L. A. Duhring was interested in listening to this practical paper, in which, among other points, attention was directed to the fact that carcinoma at times followed both lupus vulgaris and lupus erythematosus, also that carcinoma was much rarer after the erythematous varieties of lupus than after common lupus. This recalled to mind the case of a man about forty years old, with light-red hair, who had a marked lupus erythematosus covering both cheeks. The lesions were typical and were very pronounced. They proved entirely intractable to treatment, and in the course of a few years there developed a marked carcinoma in one patch. The disease grew rapidly, so that in about a year it extended over the entire cheek. He died within eighteen months after the carcinoma was first observed.

Dr. S. Pollitzer wished to ask Dr. Duhring whether, in his case, any mechanical methods of treatment were resorted to, such as scarification or curettage?

Dr. Duhring said that all the usual methods of treatment had been employed at one time or another.

Dr. Pollitzer: An epithelioma following lupus, whether of the vulgaris or erythematosus type, might depend upon these mechanical methods of treatment. By these methods particles of epithelium were torn from the surface, implanted in the corium and left there, and one might account for the development of epithelioma in this way. Otherwise, it was difficult to see why an inflammatory process like lupus, of either variety, should result in epithelioma more frequently than any other inflammatory disease.

Dr. Gilchrist was very much interested in Dr. Hartzell's excellent paper. We were all acquainted with the pre-cancerous conditions to which he referred. The findings in connection with the sweat-glands and follicles were very interesting. He had never examined these microscopically, but entirely agreed that these keratotic lesions not infrequently preceded epithelioma.

Dr. Hartzell: (Closing the discussion). He fully intended to in-

clude the X-ray dermatoses in his list of pre-cancerous affections, but was prevented from doing so by lack of time.

He again wished to emphasize the fact that he was firmly convinced that the lesions of senile keratosis had nothing to do with seborrhœa at all. The affection was a keratosis, and if it were connected with the glandular apparatus at all, it was with the sweat glands.

It was possible that the observation of Dr. Engmann was correct, and that sunlight might have something to do with the production of these lesions. He knew of one case where such lesions developed on the forehead, and disappeared permanently after a severe sun-burn received at the sea shore.

It was true, as Dr. Pusey brought out, that the very essence of epithelioma was an invasion of the healthy skin by epitheliomatous tissue, and its reaction against such invasion.

RECENT CONTRIBUTIONS TO OUR KNOWLEDGE OF THE HYSTERICAL NEUROSES OF THE SKIN.

By Arthur Van Harlingen, M.D., Philadelphia.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

In a paper read before this Association in 1897[1] I reported several cases of erythematous eruptions occurring in hysterical persons and leading to excoriations or perhaps to what might be called superficial gangrene. These cases belonged to a very well-known class of affections which had usually been regarded as factitious: but, in the discussion which succeeded, it appeared that most of the members of the Association agreed with me in considering such cases as sometimes of spontaneous origin. The fact that many observers report these cases as gangrene tends to obscure the distinction which I think should be made clinically and for convenience sake between them and other cutaneous manifestations occurring in hysteria. I attempted in a subsequent paper[2] to collect and classify the various skin affections which had been reported as occurring in the hysterical, and which had been regarded as connected in some intimate manner with the pathology of hysteria. Although most of the hysterical neuroses of the skin are allied to each other in their nature, yet it

[1]Report of Five Cases of Erythematous Hysterical Dermato-neurosis.—*International Medical Magazine,* November, 1897.

[2]The Hysterical Neuroses of the Skin.—*American Journal of the Medical Sciences,* July, 1897.

seems to me more convenient to regard them as distinct, and to record them in connection with their dominant feature.

Thus, the so-called "neurotic excoriations" of older writers have been classed as erythema, since that is the dominant appearance, and, in many cases, the process goes no further or, at most, terminates in a very superficial destruction of the epidermis.

Cases of this character were described at the same meeting of the Association (1897) by Dr. Shepherd, under the title of "Feigned Eruptions," and by Dr. Corlett under the title of "Spontaneous Gangrene of the Skin." Since then several other cases have been reported, but nothing has been described to modify in any manner the picture of this form of hysterical neurosis as described by me in the papers above cited.

Under the title of gangrene of the skin numerous papers have appeared in the last six years. I shall briefly note the chief of these and shall then discuss the general theories of the subject.

Balzer reports a case in which urticaria, erythema and pemphigoid bullæ occurred in successive attacks, some of the lesions terminating in ulceration. A later series of attacks took on the form of patches of gangrene,—foci of gangrene surrounded by red areola—and, finally, the gradual development of keloidal scars. The lesions were chiefly upon the pectoral and mammary region and the face, but also occurred on the hands, inguinal regions, thighs, feet, back of neck and elsewhere. The patient was a young, highly hysterical woman, and was under observation more than four years. Every precaution was taken against deception. However, the case as reported seems to me to point to some artificial causation.

Bettman reports the case of a married woman 26 years of age, of hysterical antecedents, who presented an eruption seated upon the right side of the face, neck, shoulder, right pectoral and scapular regions, and extending down the extensor surface of the arm and forearm. The eruption comprised groups of papules and vesicles, with scattered lesions arranged like those of herpes zoster. The solitary lesions were herpetic in character, but the groups were eczematous.

Dubreuilh (quoted by Bettman) reports the case of an hysterical person with unilateral anæsthesia and muscular contraction of the arm and hand in whom œdema of the forearm occurred, with defect of the epidermis, followed by ulcers. Subsequently there was a recurring succession of blebs upon the palm, followed by a rebellious eczematous eruption.

Derville gives the case of an hysterical servant-girl 18 years of

age, who entered the hospital for a prominent erythematous patch on the cheek, showing a well-marked raised edge. The patch had an erysipelatous look, but showed no elevation of temperature. While under observation similar patches appeared on the left cheek, the scalp and elsewhere. Later, after having burned her hand and forearm with sulphuric acid in cleaning the floor (by accident?), she developed new burns and gangrenous patches on the arm. The latter being hermetically sealed, no new lesions appeared under the seal, but some appeared outside. The ulcers left after separation of the eschars healed slowly. At one period the patient was detected placing small pieces of blistering plaster between her toes. The diagnosis of "simulated hysterical gangrene" was made.

Hallopeau and Costenson report the case of a man of 25, a neurotic and degenerate, showing unmistakable signs of hysteria, who developed a gangrenous patch on the left elbow which was followed by ulceration. Blue œdema of the forearm and arm followed, with paresis of the member. The ulcer spread and became deeper, and a second one developed upon the posterior surface of the forearm. This was at first a violaceous spot, soon turning brown, becoming sphacelated in the center, and ulcerating.

Hintner records a case which seems to belong to the same category as the well-known cases of Sinkler, Duhring, Wende and others. The patient was a girl of 21, of hysterical antecedents, who showed (following a burn of the left hand) certain lesions, at first limited to the left arm, but afterwards spreading over the body generally. The lesions were at first bullous in character and were accompanied by lancinating pains. Later, the vesicles or bullæ upon the left arm assumed, on drying up, a deep brown color and formed an eschar which became detached somewhat later, and was followed by a keloidal cicatrix. Certain bullæ upon other parts of the body healed and dried up without leaving eschars.

Krecke gives the case of a highly hysterical woman of 61 who displayed small scars on the face, right forearm and arm, chiefly upon the flexor side. On the left arm were traces of former lesions, together with brownish dry crusts surrounded by a slightly reddened skin. Some of these could be detached, leaving shallow ulcers. There were a few similar lesions on the thighs.

In this case, which was one of hysterical self-infliction, there was a desire for operations, etc.

Perrin reports the case of a girl of 15, of somewhat doubtful hysterical antecedents, who was attacked by firm œdema of the back of

the left hand and forearm. There was no spontaneous pain, but when the limb was moved it gave rise to pain. There was some diminution of sensibility to touch and to pain in the left arm and upper left side of chest. Later, bullæ of various sizes appeared, and, while the œdema gradually diminished, fresh crops of bullæ developed at intervals for some months. Some of these showed purulent contents and a red areola. The bullæ, which were at first confined to the dorsal surface of the hand and the lower two-thirds of the extensor surface of the forearm, later involved the palm and the flexor surface of the forearm. Some of the lesions ulcerated and became covered with black crusts. The patient's health remained good. Simulation was guarded against by occlusive dressings. There may be some question as to the truly hysterical character of this case, but it has been thought well to include it.

Rasch gives the case of a highly hysterical girl of 18 who had on various occasions applied blisters to her face to "draw out" some disease which she thought existed, and who showed on examination an eschar surrounded by red, swollen skin on the flexor surface of the left arm above the elbow. Later other outbreaks appeared, usually bullar in form at first, but later becoming ulcerated. These lesions were on the left forearm. A similar lesion appeared at the base of the left fore-finger, which the patient said had been wounded by an axe. The case was under observation at intervals for a long time. At one time the patient admitted having caused some of the bullæ by means of cantharidal plaster. She said "it came over me suddenly. I had to do it," etc.

Engman reports a case of somewhat similar character showing a transition stage between factitious or simulated eruptions of the common type and purely spontaneous hysterical eruptions. His case was that of a young woman who, after various eruptive disturbances, developed a number of lesions of various size on different parts of the body and limbs, chiefly the left arm, over the mons veneris and over the nipples. These lesions were artificial and inflammatory in their nature, and were produced by the patient with the aid of "cresoline" and under the influence of an irresistible impulse which she could not explain.

Wende's case, described before this Association in 1900, related to a young hysterical girl who had cauterized the back of her right hand with carbolic acid. This cauterization was followed by the appearance of a gangrenous eruption at various points on the hand, arm, etc. The case belongs to a well-defined sub-category of hysterical gan-

grene, that in which the injury of some part, usually one of the upper extremities, is followed by lesions in the neighborhood or at a distance.

Several cases of Raynaud's disease, occurring in connection with hysteria, have been reported within the last six years.

Destot reports the case of a patient with severe and well-marked hysterical symptoms whose hands were the seat of vaso-motor phenomena resembling those of Raynaud's disease. The signs of ischæmia and of congestion alternated. At one moment the hands (or fingers) would look like those of a cadaver and a moment later they would be highly colored. The extreme tips of the fingers showed fissures and depressions, the result of trophic disturbance proceeding even to sphacelation.

Souques reports the case of a man of 27 (probably hysterical) who had suffered for two years with paroxysmal vaso-motor disturbances (local syncope, asphyxia of the extremities, hyperæmia), accompanied by anæsthesia and severe pains, recalling the crises which occur in Raynaud's disease. These symptoms were localized in the hands following a dog-bite in the right hand. The inflammatory symptoms, having lasted for seven months, eventuated, according to Souques, in a change in the "vaso-motor régime," fixing the attention of the patient, and, as a result, localizing the neurosis. The crises occurred in one or both hands several times daily, gradually increasing in number to eight or ten a day.

The patient was ordered methylene blue, with the suggestion that the blue color of his hands would pass out with the urine and that he would then be cured. A cessation of the attacks for twelve days, up to the date of the report, was thus obtained.

The cases reported since the date of my last paper cover most of the varieties as heretofore described. Tonnellier, in his thesis, divides the hysterical gangrenes of the skin into a number of types:

1. (That of Veuillot's case.) Slight circumscribed pemphigoid eruption on an anæsthetic skin, without pain, or with very slight accompanying pain. Either progressive ulceration or rapidly healing ulcers.

2. (Stubenrauch's type.) Injury; painful eruptions as the point of lesion; healing with keloidal scar.

3. (Ehrl's type.) The same as the last, but the eruption attacks distant parts.

4. (Bayet's type.) Injury. Eruption not at the lesion, but in the neighborhood. The lesion remains circumscribed.

5. (Blandin's type.) Unilateral development.

6. (Leloir's type.) Generalization with relapses.

7. (Kopp's type.) Unilateral, with pain in certain nerve areas. (A transition form to the so-called herpes zoster hystericus.)

8. (Veillon-Bayet's type.) Symmetrical localization upon the hands. (A transition form to Raynaud's disease.)

Although this classification may appear a little finely drawn, yet, if the cases we have seen or have read about are fitted to it, it will be seen that in a general way the scheme covers the ground and gives an opportunity of classification from a clinical standpoint.

Bettman, in an extremely elaborate production, discusses the causation of gangrene in hysteria. He refers to the old distinction of trophic nerves, etc., but lays little stress on this point. He says that the rapid spread of our knowledge of bacteriology throws some light on the subject, but still more recent investigations in metabolic pathology calling attention to auto-intoxication in the production of skin diseases seems to afford more information.

We must admit, however, that this is somewhat vague, but so are our views on the subject. This is Bettmann's classification. In my former paper I have included *hyperidosis, chomidosis, pigmentation, vitiligo pigmentation,* and *lichen,* cases of each of which have been reported.

The skin affections occurring in connection with hysteria are the following:

1. Dermographism.
2. Erythema.
3. Urticaria.
4. Hemorrhages.
5. Peculiar forms of œdema.
6. Bullar dermatitis.
7. Solitary and multiple ulcers and gangrene (including Raynaud's symptom-complex).
8. Certain eczemiform eruptions.

In addition, affections of the hair and nails have been reported.

Most hysterical skin affections appear, at least at first, to be vaso-motor in character. Bettmann says that the fact that the various eruptions may occur two or more at the same time or in sequence shows the existence of a vaso-motor diathesis. In one case (Perrin's) a hard œdema first showed itself and when this lesion had disappeared, pemphigoid blebs followed, which developed into intractable ulcers. Verrier has reported a case in which successive blebs appeared upon an œdematous and anæsthetic base, and these developed by scratching into

large ulcers. Numerous similar instances might be quoted from the cases which I have noted above, and the many similar ones which abound in recent literature. The cases of pseudo Raynaud's disease occurring in hysteria may also be mentioned as exemplifying the presence of a vaso-motor diathesis.

Although the type varies greatly in the different cases of hysterical gangrene, each case, in fact, showing certain characteristics peculiar to itself, yet there are certain points common to all. The great majority, in fact nearly all of the cases, occur in young females showing signs of hysteria, usually of a mild type. Tonnelier says that gangrene does not occur in patients with severe hysterical contractures or paralysis; (I am not sure, however, that this rule does not occasionally have exceptions). The affection frequently develops after some slight accident, a burn, or some injury from a corrosive, a cut or a puncture. The first eruption commonly occurs at or in the immediate neighborhood of the injury, with considerable sensory irritation. (There is a class of cases, however, in which the first eruption may occur at a distance.) This irritation usually introduces subsequent outbreaks. The first symptoms are various. Sometimes the prodromata of gangrene are entirely absent. At other times the gangrene develops from urticaria or erythema, or, more frequently, from pemphigoid blebs. Occasionally a zosteriform eruption is the first symptom. When gangrene is established, the separation of the eschar often leaves an intractable ulcer terminating in a keloidal scar.

While the favorite seat of hysterical gangrene is upon the extremities, the face and the mammary region and other localities are sometimes involved, as the external aural cavity and the mucous membranes.

The question of self-infliction is of great importance in the study of these cases. In a few cases this has been verified and attributed to the usual causes of desire to excite sympathy, to escape disagreeable tasks, etc., but the inquiry in the light of modern views of hysteria must go deeper. In some instances lesions which on superficial examination have seemed to be the result of rubbing, the use of caustics and the like, have been shown on careful investigation to be different from the effects of such external applications. Kaposi has observed that in spontaneous gangrene punctiform hemorrhages and necroses of the papillary bodies are found under undisturbed coverings of the bullæ, while an external irritant or caustic always destroys the epidermis previously. Bettmann says that two points may be noted in this connection:

1. The motive of any self-injury remains unknown. Simulation may be the result of compulsory action (*Zwangshandlung*) or of the action of an abnormal psyche. Such self-inflicted injuries belong to the same category as those compulsory habits of nervous subjects, as *onycophagia* (nail gnawing), *dermatothlasia* (the custom of scratching, rubbing or washing certain areas of skin), *trichotillomania* (the habit of pulling out hairs), etc.

2. Self-injury may be inflicted upon a skin of diminished resistance. Analgesic areas may become the seat of gangrene not only because the patient is more likely to attack such parts of the skin as are least sensitive, but also because these parts are under such trophic influence as to permit a more decided effect from any violence. Ordinary adhesive plaster caused gangrene in one case, while in another quaddets could be produced at will by sticking a pin into the skin. It may be noted that similar results have been seen in cases of syringomyelia. The name "demi-simulation" has been applied to the condition in some cases of gangrene, etc., occurring in hysteria.

Considerable difficulty is sometimes experienced in making a differential diagnosis between hysterical gangrene and that which sometimes occurs in syringo-myelia. In well-marked cases of the latter no difficulty need arise, but in atypical and rudimentary forms, in which the motor symptoms give way before sensory and trophic disturbances, some doubts may arise. Bettmann enumerates the affections of the skin most apt to occur in syringo-myelia, and adds that occasionally syringo-myelia and hysteria occur in the same case, making the diagnosis still more difficult.

The question as to a possible relation of hysteria to herpes zoster may arise. Hysterical eruptions sometimes occur in the form of distinct or abortive vesicles which may be grouped in the form of true herpes zoster. On the other hand, true herpes zoster sometimes proceeds to partial or total necrosis. Hysterical gangrene, however, differs from zoster in its irregular development, in displaying persistent relapses, and in the absence of the sensory disturbances of zoster, though other disturbances of sensation are noted. It may also occur on both sides of the body, a most rare occurrence in zoster. The eruption very rarely indeed corresponds with nerve or segmental spinal areas. Finally, a most marked difference in the two affections consists in the fact that gangrene is rare in true zoster, while in the so-called hysterical zoster this is the dominant lesion.

Next in frequency to the reported cases of gangrene in hysterical cases have been those of hemorrhagic eruptions of various kinds.

Some of these have been collected by Bert in his thesis, and others have been found scattered through the medical literature of the past six years. I have not made an exhaustive examination of these, but have noted those which have attracted my attention.

Raymond (quoted by Bert) gives the case of an hysterical woman who developed ecchymoses, at first on the external border of the right foot, later on the shoulder and arm. When fully developed there coexisted anesthesia and paresthesia of the affected member. There were no prodromal symptoms.

Etienne (quoted by Bert) gives the case of an hysterical girl of 13 on whose arms there suddenly appeared ecchymotic stripes extending from above downwards. The first lesions disappeared in a few days, but were followed by a succession of others for some weeks. When examined by Etienne a year later during a subsequent attack, he found a series of curved ecchymotic stripes running down the arm, and composed of simple ecchymotic patches or a series from one to five centimetres long by three to ten millimetres in width. There was epistaxis, and slight sub-conjunctival hemorrhages. Very slight dermographism.

Chipault (quoted by Bert) gives the case of a woman of forty who suffered from hysteria following a severe fright. She had various hemorrhages from the ear and from the nose, with hematemesis from time to time. Each attack was preceded by a nervous crisis. Having been gently pushed against some hard object one day, she felt extreme pain in the right breast, followed by a convulsive attack. Three hours later a somewhat abundant hemorrhage took place from the nipple. The next day she experienced a sudden pain in the breast, followed by a suffocative attack, and the hemorrhage appeared again from the nipple. Examination failed to show the effect of traumatism nor, indeed, any change in the external appearance of the parts. There was an area of excessive hyperesthenia over the lower portion of the breast. Etienne tried suggestion and sent the patient out of the hospital. In three days she returned without having had any further hemorrhage from the nipple, but displaying on the upper surface of the breast three small, slightly elevated purpuric spots. No ecchymoses were observed elsewhere.

Béclère (quoted by Bert) reports the case of a young hysterical girl, 13½ years of age, who had suffered with ecchymoses from her ninth year. The first two ecchymoses appeared in the popliteal region symmetrically, one on each limb. No others appeared until the epoch of menstruation, when one appeared on each breast. Others

appeared from time to time in the same locality at shorter intervals. They usually lasted about two weeks. Finally, there were as many as six or seven on each breast quite symmetrical in character. Later, similar spots appeared after some emotional outbreak. Shortly before she came under Béclère's observation her mother noticed a drop of blood oozing from one of the ecchymoses on the breast. This occurred on three separate occasions. The ecchymoses were not accompanied by any pain, but the skin in their neighborhood was hyperesthesic. Vomiting and suffocative attacks accompanied the outbreaks latterly.

Bert records the case of a young pregnant woman who, after violent emotion, began to experience various hemorrhages from the uterus, nose, mouth, ears and mammæ. The mammary hemorrhages took place sometimes from one nipple, sometimes from the other. They were announced by a feeling of weight in the breast, as if the milk were coming, then followed the sudden expulsion of a certain quantity of bloody fluid from the nipple. There were no ecchymoses nor other changes in the skin. The patient's general health remained good, though there were undoubted hysterical symptoms.

Pepper and Taylor report two cases of ecchymoses, one hysterical, the other of doubtful nature. Other forms of hemorrhage coexisted. The eruption appeared at various points. In one case hard œdema or lesions resembling those of erythema nodosum were observed.

Bruce and Galloway report a case of dermographism followed by purpura in a man. The case is doubtful as regards its hysterical character.

Mirallié reports two cases of ecchymoses occurring in neurasthenia. Like the former case, these are only mentioned as perhaps throwing some light on the general nature of hysterical ecchymoses.

Very few cases of hysterical skin affections other than gangrene and hemorrhage have been reported in the last few years. Montfort and Mirallié report the case of a woman accustomed to heavy work with the right arm who had three separate attacks of pain in the arm and hand, with the outbreak of a dry, scaly, eczematous eruption at the palmar base of the thumb, and over the neighborhood of the hypothenar eminence. The patient had at various times shown unmistakable signs of hysteria. Rest and applications to the forearm, with suggestion, cured the disease in a short time. Some cases of affections of the appendages of the skin have been noted of which I may refer to the following:

I have reported the case of a woman of thirty of markedly neurotic temperament in whom a painful recurrent phlyctenular eruption was accompanied by the formation of numerous atrophic pits in the finger-nails of the left hand and of the thumb of the right. There were also alopecia and graying of the hair. Some hysterical symptoms were present.

Dubreuilh gives several cases of alopecia and plica occurring in hysterical cases. In one a neuropathic married woman of thirty complained of falling of the hair, with one smooth place on the right side of the frontal region. On examination the scalp showed slight seborrhœa, the hair was dull and dry and could readily be pulled out. The root was atrophied, dry, dead, somewhat deeply seated without adherence. Some few hairs were healthy, others were broken off and stuck in the scalp like twigs in butter. The bald patch on the right frontal region showed simply a further degree of the general disease. While under observation the hair continued to fall out until the scalp was almost bald, a few scattered hairs being distributed over the scalp. Gradually the hair was renewed, and by the end of a year the complete cycle was accomplished and the scalp covered with hair some 15 centimetres in length.

A second case showed generalized partial alopecia with dryness of the hair, which looked as if it had been burned. In the front of the scalp the hairs were crinkled, brown, dry and dead, and were matted together. A portion of the hair on the back of the head was also felted into a plica. A third case showed a variety of conditions;—first oily, then dry and crinkled, and finally, breaking off and becoming plicated.

Bibliography.

Gangrene.

Balzer. Gangrene cutanée hysterique. *Ann. de Derm. et de Syph.*, 1898, p. 53; 1899, p. 1090; 1902, p. 1036.

Bettmann. Ueber der Haut Affectionen du Hysterischen und der atypischen Zoster. *Deutsche Zeitschr. f. Nervenheilk*, 1900, Bd. 18, p. 345.

Cassirer. Die Vaso-Motorisch-trophischen Neurosen. Berlin, 1901.

Corlett. Jour. Cut. and Gen.-Urin. Dis., 1897, p. 551.

Derville. *Journ. Des. Sci. Med. de Lille*, 1901, Vol. 2, pp. 193, 217.

Gall. Thèse de Paris, 1902.

Hallopeau and Costenson. *Ann. de Derm. et de Syph.*, 1899, p. 74.

Hintner. *Ann. de Derm., et de Syph*, 1897, p. 923.

Krecke. *Münch. Med Wochenschr*, 1895, p. 69.

Perrin. *Ann. de Derm. et de Syph.*, 1899, p. 183.

Rasch. *Dermat. Centralbl*, 1899, p. 322.

Shepherd. Jour. Cut. and Gen.-Urin. Dis., 1898, p. 543.

Tonnelier. Thèse de Paris, 1896.

Wende. *Trans. Amer. Dermat. Assn.*, 1900. Jour. Cut. and Gen.-Urin. Dis., 1900, Dec.

Raynaud's Disease.

Destot. *Lyon Medical.* V. 93, 1900, p. 378.

Souques. *Bull. et Mém. de la Soc. Méd. des Hôpitaux de Paris*, 1902, p. 538.

Hemorrhages.

Bert. Contrib. a l'étude des hæmorrhagies multiples d'origine hystérique, *Thèse de Paris*, 1901.

Beclere. Ecchymoses spontanées symetriques des quatres membres, etc. Soc. Med. des Hôp. *Ann. de Derm. et de Syph.*, 1901, p. 795 (quoted by Bert).

Bruce and Galloway. Purpura and Dermographism. Probably hysterical. London Dermat. Assn. *Ann. de Derm.*, 1898, p. 913.

Chipault. Travaux de Neurologie Chirurgicale (quoted by Bert).

Combes. Sur un cas d'hématidrose du cuir chevelu, *Arch. Med. de Toulouse*, Sept. 15, 1900, No. 409.

Etienne. Purpura hystérique spontanée, *Soc. Med. des Hôp.*, Dec. 15, 1899, p. 915 (quoted by Bert).

Hyde. A contribution to the study of bleeding stigmata, Jour. Cut. and Gen.-Urin. Dis., 1897, p. 557.

Mirallie. Ecchymoses Spontanées dans la Neurasthénie, Soc. de Neurologie de Paris, *Ann. de Derm. et de Syph.*, 1902, p. 821.

Pepper and Taylor. Two cases of Morbus Hemorrhagicus Nervosus, *Phila. Med. Jour.*, 1899, p. 1005.

Raymond. Soc. Med des Hôp. 1900, Dec. 26 (quoted by Bert).

Sainton. Hemorrhages from the Nipples, etc., *Soc. Med. des Hôp.*, Apr. 19, 1901 (quoted by Bert).

Van Harlingen. Recurring Phlyctenular eruption of the fingers with changes in the nails, possibly of hysterical origin. *Internat. Clinics*, Vol. IV., 1903, p. 180.

Dubreuilh. Troubles trophiques des cheveux (Alopecie aigu,

plique, d'origine hysterique), *Ann. de Derm. et de Syph.*, 1902, p. 364.

Montfort and Mirallie. Eczema palmaire chex un hystérique, *Ann. de Derm. et de Syph.*, 1898, p. 1264.

Raymond and Cestan. —Œdème de la main et du bras gauche chez une hystérique, *Bull. et Mem. des Soc. des Hôp. de Paris*, 1901, Jan. 6.

Leon. Contribution a l'étude de l'œdème bleu hystérique, *Thêse de Paris*, 1899.

David. Contribution a l'étude clinique de l'œdème bleu hystérique, *Thèse de Paris*, Jan. 26, 1899.

Pannetier. Des Eruptions cutanées d'origine hystérique, *Thèse de Paris*, 1897.

RECURRENT, PROGRESSIVE, BULLOUS DERMATITIS IN AN HYSTERICAL SUBJECT.

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Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE subject of this peculiar affection is a young woman, twenty-three years of age, and a native of Vermont. According to her story, she was quite well until her twelfth year, when, without any apparent cause, an inflammation of the bladder and bowels occurred. The inflammation soon spread to the stomach and peritonitis developed, which was treated medically by her local physician. At thirteen, menstruation began. From the time of her original peritoneal infection up to the present date her bowels have been obstinately constipated, their average evacuations occurring once in seven to ten days; while on one occasion, she says, there was no movement for thirty-seven days. Micturition is impossible and emptying of the bladder is accomplished only by catheterization. On account of an apparent return of her peritonitis, the patient was operated upon and both of the ovaries were removed. This was in 1888, and soon afterwards measles developed, with subsequent loss of the voice, which persisted for a year, when the patient had grippe and pneumonia and her voice returned.

The family history is equally striking. The patient's father had

consumption and died at the end of five years, when she was seven months old. Her brother takes cold very easily and the process quickly involves the lungs. Her half-sister (by her mother's second marriage) has "a severe lung disease." Her mother is alive and forty-six years old, but has never been strong. She has always been intensely constipated, and from childhood her bowels have never moved more than once in two weeks. She does not seek medical relief from this condition, "for she has learned that nothing is of any service." She has never had any skin disease except a varicose ulcer, which was present when the subject of this paper was born. At the present time she suffers from migraine.

At my request, the patient's physician, Dr. N. L. Dow, of Glover, Vermont, sent me his medical notes upon her case, which I here transcribe, as I think it is interesting to compare the account of the family physician with the possibly exaggerated story of this hysterical individual. It gives me pleasure to acknowledge here my indebtedness to Dr. Dow for his kindness in sending me the following details: "In the year 1887 I treated Miss X. for hysterical retention of the urine, and I have known her to go for forty-eight hours without emptying her bladder. I was called once at this time and was obliged to use the catheter. The patient continued to have these spells, and by constant distention of her bladder developed a paralysis of this organ. During the same summer Miss X. had ovarian neuralgia and obstinate constipation, for both of which I treated her for nearly two years. In 1888 the patient fell into another physician's hands, who made the diagnosis of pelvic abscess, and at his request a third physician opened the abdomen and found no pelvic abscess, but removed both ovaries, which I think has proved beneficial. In 1899 Miss X. developed what seemed to be laryngitis, and lost her voice for about a year. For this trouble she was treated by a fourth physician. In 1900 a skin disease appeared upon her ankle, which was called erysipelas by some and later she fell into the hands of a fifth doctor, who diagnosticated syphilis and administered large doses of mercury and of iodide of potash. Miss X's father died of consumption. Her mother is apparently a strong, healthy woman so far as I can learn."

For the history of the cutaneous lesions I shall return to the words of the patient, who, during our interviews, always appeared quiet and seemed to understand herself thoroughly and repeatedly told a consistent story.

In 1900 a bulla appeared on the dorsum of the left foot. This had nearly healed, when other bullæ appeared a little higher up on

the foot, which in their turn healed and gave place to others still higher, and thus, with weekly attacks of fresh bullæ, always higher than their predecessors, the disease gradually spread up the leg until at the end of a year the middle of the thigh was reached. Then the eruptions ceased and for two months there was an absolute cessation of the process.

In 1901 the disease began again, this time commencing on the fingers of the left hand, and in exactly the same manner the bullæ appeared in weekly crops and spread gradually up the arm to the left shoulder; and at the same time bullæ continually formed about the ankle, but remained confined to this area on the lower extremity. This attack required ten or eleven months to reach its end, and then gave way to a healthy interval of two months.

In the summer of 1902 the disease broke out again, this time upon the left side of the abdomen and chest, and had continued until the date of her first visit to the Massachusetts General Hospital, December 16, 1902. During this attack there have been a few scattered bullæ upon the foot, but none on the upper extremity.

The subjective symptoms have been the same throughout the last three years. Before an attack stinging and burning are felt, and soon the skin grows red. These feelings last about two hours, give way to great smarting and exudation begins. A bulla two inches long requires but four hours to reach its maximum development, when the patient feels at her worst. She then draws off the serum and feels weak and languid for the ensuing twenty-four hours. The whole cycle requires about seven days for its completion.

Miss X presented herself at the Massachusetts General Hospital for the first time at the climax of one of these attacks. She seemed to be suffering acutely, and said that she felt weak and faint. On the left side of her abdomen appeared an area about six inches square composed entirely of large, oblong bullæ, whose long axes ran horizontally and were separated from one another by the smallest possible amount of normal skin. The individual bullæ varied in size from a lentil to a chamber one inch in its long diameter. They were all markedly but irregularly rectangular in shape and very tense, and seemed to rise up from an apparently normal skin which showed no signs of erythema or œdema. The same process on a smaller scale was present upon the left breast. The surrounding skin never presented any evidences that the lesions had been produced by external, artificial means, although it was only after mature deliberation and after the exhaustive physical examinations to which the patient was subjected that one

could give up the idea that the patient was a malingerer. For four or five weeks Miss X came to us, and we were given ample opportunity of studying her case. Usually the bullæ were at the acme of their development, but on one or two occasions it was possible to examine the skin during an interval, and with the exception of a slight but dull erythema there were no pathological signs present. Œdema, infiltration, desquamation, crusting, loss of epithelium, ulceration, were all absent, and it seemed incredible that the large bullæ which were but a few days previously at their maximum should have subsided without leaving more than a trace of their existence. On another occasion the lesions were just beginning, and we were enabled to watch the progress of the disease during one and one-half hours. At 9.30, over the left breast a brilliant, disseminated erythema was present, which at eleven o'clock had developed vesico-bullæ, one of which Miss X allowed to be excised. During the operation, Dr. Burns, our assistant, reports that she was calmer than the majority of patients. Soon after this, Miss X became impatient and somewhat discouraged, and finally returned to her native town.

At my request, Miss X was examined thoroughly in the neurological and in the medical departments of the hospital, and I wish to express my sincere thanks to Dr. J. J. Putnam and Dr. Waterman, of the former, and to Dr. J. M. Jackson, of the latter department, for the subjoined reports, which certainly throw much light upon this unusual affection:

NEUROLOGICAL REPORT.

"The ears are asymmetrical, the left one being more shell-like and devoid of normal markings than the right. The palate is high and rather narrow.

"As the examination proceeds, a bright-red flush appears over the angle of the jaw on both sides and extends down the neck, covering an area the size of the palm of the hand.

"The pupils are rather large, regular in outline, equal in size and react normally. The field of vision of both eyes is considerably diminished, both for motion and for colors, as tested by the perimeter, and the fatigue resulting from the tests causes greater limitation.

"Patient hears the watch tick four feet from right ear and one foot from left ear and bone conduction is markedly less on the left than on the right, as tested with the tuning-fork.

"The skin of the left half of the body is cooler than the right, and sensibility to touch and pain is diminished over the whole left side.

"The knee-jerk is less on the left than on the right, the former

being within normal limits, while the latter is much exaggerated and causes an involuntary jump of the body.

"The electrical reactions tested on the muscles of the hands and arms show the irritability to be greater on the right side than on the left, both to galvanism and to faradism.

"When excited, cold or angry, the patient's third and fourth fingers of the left hand become '*digiti mortui.*' "

Diagnosis, Hysteria.

MEDICAL REPORT.

"Heart normal in size. Lungs negative. Slight Litten's sign on the right side, no Litten's on the left. Abdominal skin reflexes more marked on the right. Scar of old laparotomy.

"Fundus of uterus a mere nubble. Cervix small. On right side in ovarian region is a slight, tender mass the size of the tip of the finger. Rectum normal to digital examination. Apparently complete atrophy of uterine fundus.

"Urine neutral. Sp. gr., 1.012; albumen and sugar absent.

"Blood. Hæmoglobin, 100 per cent. (by Tallquist). Stained specimen shows red corpuscles normal in size, shape and color. No leucocytosis."

HISTOLOGY.

For histological study what appeared to be an incipient vesicle was excised, but on microscopical examination a much more complicated picture was revealed. In some areas signs of regeneration of the epidermis are manifest, while in others minute superficial vesicles appear; but nowhere can one find a typical, well-developed vesicle large enough to correspond with the macroscopical appearances. The specimen was hardened in alcohol, imbedded and cut in paraffin and stained in various ways. About fifty sections were examined.

The stratum corneum is thin throughout, showing no signs of hyper or parakeratosis. The layer is almost everywhere separated from the underlying strata, and in many places ragged and torn, while in certain foci it is completely wanting.

The stratum granulosum is everywhere reduced to a single layer of poorly developed granular cells containing only a minimum amount of kerato-hyalin. In the focus of regeneration to which I have just alluded the granular and horny cells are entirely absent.

The rete Malpighii presents such a varying picture that it becomes difficult to describe except in somewhat minute detail.

Where repair is taking place the superficial cells are greatly dis-

organized. The upper third of the layer is apparently wanting. The middle third is composed of rather amorphous protoplasm where cell boundaries are infrequent and nuclei appear singly or grouped in twos and threes within a single cell envelope. In the lower third cell divisions and nuclei reappear, but the protoplasm is still abnormal, being shrunken against the cell wall, forming perinuclear halos, while the nuclei themselves are small and contain no nucleoli. The palisade layer is poorly developed. Below this focus of regeneration papillæ are absent and the corium appears poor in cell nuclei. Large, dilated, horizontal vessels are present, but there is a marked absence of perivascular infiltration. The whole corium, however, seems full of serum, the œdema separating the collagenous bundles.

Apart from these regenerating areas one is struck by the abnormal appearances of the remaining rete. The layer varies much in thickness, sometimes acanthotic, oftener atrophic. Signs of œdema are almost everywhere present, producing separation of the cells and shrinkage of the protoplasm, leaving the nuclei round but reduced in size and either isolated in the center of the cell or crescentic and flattened against the cell wall.

In some areas the inflammatory process is most marked where rete and corium meet. Here the lower layers of the rete are mostly gone, and what remains is composed of nuclei practically free from their cell protoplasm. Above, the upper layers of the epidermis are sufficiently normal, while below the junction of rete and corium many signs of œdema appear. The vessels are widely dilated and portions of the sebaceous glands are wanting, but cellular extravasation is conspicuously absent.

Nearby the ravages of œdema appear in the center of the rete with rarefaction of the protoplasm and disappearance of the nuclei, while within a limited area there appears a superficial vesicle the roof of which is formed by a thin line of horny cells and the floor by a wasted, œdematous rete. Between these boundaries lies a coagulated, amorphous mass containing an occasional granular cell.

The greatest degree of destruction of the spinous cells, however, occurs in the walls of the only follicle which appears in the specimen. Here the process has so far advanced that there remains only an open meshwork of cell walls, retaining for the most part their enclosed nuclei, which absorb the stain sharply. This rarefaction extends from the lower layer of the adjoining rete (which is also involved in the destructive process) down the follicle to the sebaceous glands, while the relations are lost and the follicular walls are entirely disintegrated.

The corium also shows abundant signs of vascular dilatation and destructive œdema. Papillæ are mostly wanting except where acanthosis appears. In the superficial vessels there is wide dilatation, but no endothelial changes. These capillaries contain few if any red corpuscles, but are filled for the most part with mono- and polynuclear leucocytes, while only those most widely stretched have allowed the escape of blood elements. Curiously enough the greatest epidermal destruction does not occur above the most widely dilated, superficial vessels. Deep down in the corium there appears a large, dilated vein whose coats retain their normal structure. At this same level we find scattered foci of sweat glands, the protoplasm of which seems watery and rarefied or else has dropped out from the cell walls. Slightly above these structures appears a hair papilla around which œdema has played, leaving the supporting connective tissue fibrillæ straight and widely separated.

The outpouring of œdema throughout the specimen seems focal and frequent, but all the sections show the cloudy effect associated with the presence of œdema. Strangely enough the elastic fibrillæ receive their appropriate stains sharply and appear of normal size and shape. This phenomenon I look upon as distinctly unusual, for in my experience elastin is one of the first elements of the skin to feel the effects of œdema.

I think that after hearing the history and the clinical descriptions of the cutaneous and neurological phenomena which have just been read to you, you must all agree that we have to deal with a rather extraordinary hysterical dermatitis. I don't see how we can avoid making this diagnosis, for it seems to me impossible to regard these one-sided, periodic, long-continued, progressive, bullous outbreaks as due to the ingestion of drugs or to the infliction of self-injuries, and I know of no cutaneous disease with such characteristics outside of the mysterious dermatoses which we have learned to associate with hysteria. When, however, we turn to literature to support us in this diagnosis—I mean by the discovery of exactly similar cases—I must confess that we find ourselves rather at a loss. After a conscientious perusal of dermatological and of neurological textbooks and a comparatively thorough study of original articles bearing upon the cutaneous phenomena of hysteria, I must state that I have found but four instances which I can regard as completely similar to the present case, and to these I shall refer later.

To refresh our memories a little, let me enumerate the types of skin affections which are known to owe their origin to an hysterical cause,

and for this purpose I can't do better than to quote from Van Harlingen's comprehensive epitome of the subject.

Van Harlingen[1] divides the hysterical dermatoses into: erythema, dermatitis, urticaria, including dermographism, hyperidrosis, œdema (pink, white and blue), urticaria bullosa, pemphigus, herpes zoster, eczema, gangrene, pigmentation, vitiligo, lichen, chromidrosis, ecchymosis and chromatidrosis. To this classification Bettmann[2] adds alopecia and solitary and multiple ulcers. Of this rather long list, the only affections which concern us in the present instance are pemphigus hystericus, pemphigus traumaticus hystericus and herpes zoster gangrenosus hystericus.

Pemphigus hystericus. Van Harlingen (loc. cit.) says that "this form of hysterical dermatoneurosis has long been recognized. The eruption takes on various aspects. The lesions may consist of phlyctenulæ or of larger blebs and they may occur alone, the bullæ rising directly from the skin without any perceptible base or areola, or they may develop from erythematous or urticarial patches. Their most frequent seat is upon the limbs, although any portion of the body may be attacked."

"The lesions may be filled with serum, with sero-sanguinolent fluid, or in many cases they may be semi-purulent or purulent. Commonly the individual lesions run a rapid course, but the eruption is kept up by repeated outbreaks. Not infrequently each outbreak is connected with an hysterical attack, or in women with the occurrence of the menstrual period."

Tommasoli[3] characterizes the disease in the following manner:

1. The eruption is polymorphous—erythematous, vesiculo-bullous, or also phlyctenular—and the vesicule-bullous lesions resemble those produced by a vesicatory and their course is the same.
2. The distribution of the lesions is irregular.
3. Each crisis lasts from one to two weeks.
4. The course is always benign.
5. The disease occurs almost entirely in women and especially in hysterical ones.
6. Eruptions can appear at all ages, but especially in youth.
7. The process renews itself by crises or by successive, irregular attacks.
8. The attacks often return at the menstrual epoch.
9. The outbreaks either follow or come between hysterical crises.

Literature contains comparatively many individual examples of pemphigus hystericus, but I have thought it better to give these com-

prehensive descriptions, for they tell us in a few words the essential features of this rare disease; but although the present case answers in practically all respects the necessary requirements, I cannot bring myself to call a disease pemphigus which is purely one-sided and which is limited to a steadily ascending, grouped eruption. I know that so great an authority as Pick[4] describes a one-sided pemphigus (vide infra), but I must agree with Bettmann (loc. cit.), who says that "we have no right, from the mere existence of bullæ on the skin, especially when the bullæ appear in circumscribed areas, to make the diagnosis of pemphigus."

Pemphigus traumaticus hystericus. Routier,[5] Kaposi,[6] Galton,[7] D. W. Montgomery,[8] Duhring[9] and others have described under this title strange cases of pemphigoid eruptions in hysterical individuals, apparently following wounds (generally upon an extremity) which have remained open for some days or weeks or months, as the case may be. Then appears an outbreak of papulo-vesicles or bullæ, at first near the seat of injury, which arise quickly and periodically, sometimes from an erythematous and painful area, at others from an apparently normal skin. Accompanying these phenomena there may be considerable swelling, œdema and inflammation of the extremity, followed by crust formation or ulceration and subsequent subsidence of the symptoms, at times resulting in scars. Later, similar conditions may appear farther away from the original trauma on other parts of the body. Pain is an important factor in these cases and the vesicles and bullæ are frequently preceded or followed by severe crises of pain which sometimes assume a darting character.

Such is the character of these strange dermato-neuroses, which have been known to recur for three or four years; and in many ways there is a similarity between them and our present case, but the absence of any history of trauma and the complete absence of swelling, pain and subsequent crusting or ulceration in our case will exclude it from this category of hysterical disorders.

Herpes zoster gangrenosus hystericus. This rare disease, first described by Kaposi, is thus epitomized by Róna[10]: "It is an hysterical neurosis characterized by—

"1. Periodic eruptions on the skin.

"2. Zoster-like grouping of lesions, which consist of erythema, papules, vesicles and gangrene.

"3. Cyclic course of individual attacks, which last from one to two days to two weeks.

"4. Repetition of attacks in the same or in new places extending over months or years.

"5. Chronicity and progressive tendency."

In studying the literature of herpes zoster gangrenosus hystericus we find all the cases characterized by gangrene and frequent fatal ending, so that we cannot place our case under this title, and we therefore finally feel ourselves obliged to give it no definite name, contenting ourselves with the descriptive title used at the beginning of this paper.

This brings me to the end of the well-recognized dermatoses associated with hysteria. Let me now mention briefly the very few cases similar to mine which, after diligent search, I have been able to glean from dermatological and neurological literature. There are only four.

In 1880, Pick[4] observed an hysterical girl of twenty-four who, three days after an attack of chills and fever, noticed a swelling on one side of the lip, which soon gave way to vesicles and later, by confluence, to bullæ. Afterwards, other attacks developed, always on the right side and always preceded by violent burning and erythema. The area affected gradually increased in extent, spreading over the face, down over the shoulder and then toward the spinal column and down toward the lower part of the body. On the same side of the trunk older, pigmented, circumscribed lesions appeared, indicating previous attacks.

In 1887, Augagneur[11] described a similar case in an hysterical woman whose bullæ of irregular shape and large size began on the dorsum of the foot and gradually spread up the leg to the popliteal space.

In 1893, Bondet[12] treated a young girl, seventeen years of age, the subject of chorea and hysteria. For several months successive eruptions of bullæ appeared on the dorsal surface of hands, forearms, forehead and cheeks. There was a definite cycle observed in these outbreaks. The skin would become reddened and slightly raised and vesicles would quickly appear and coalesce, forming bullæ, which in turn would subside, followed by crust formation and desquamation, and on the eighth day the skin would return to its normal condition.

In 1902, Du Castel[13] wrote that "some years ago he treated a young girl attacked by a bullous eruption limited to the left arm. The bullæ showed themselves at first at the extremities of the fingers, then slowly and progressively in the space of a few months the eruption gained successively areas higher upon the arm and finished by occupying the whole upper extremity. The bullæ were ephemeral and

PLATE XLII.—To Illustrate Dr. C. J. White's Article.

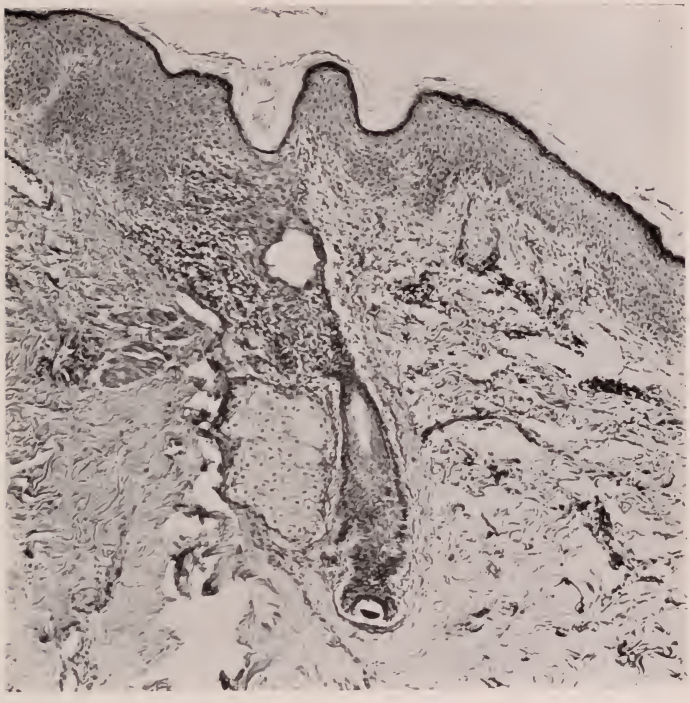


Fig. 1.

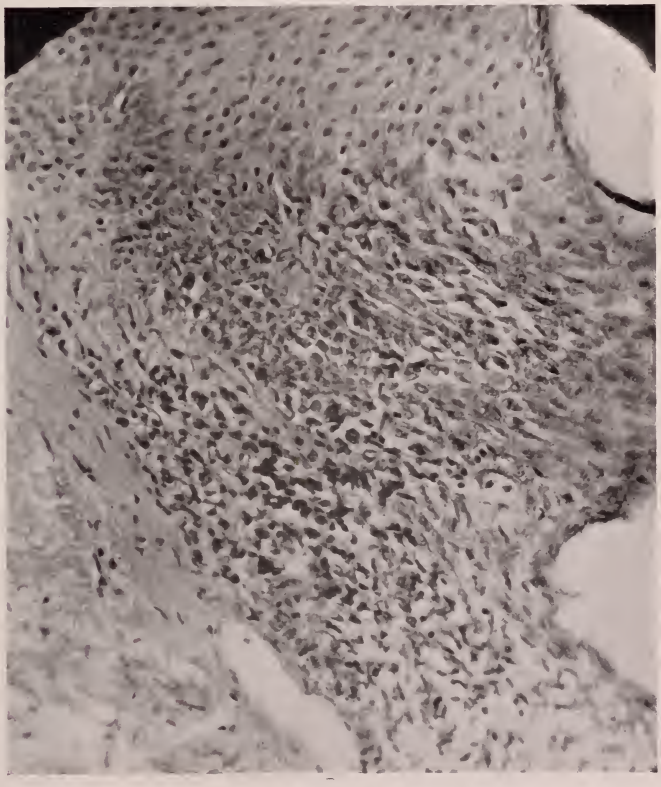


Fig. 2.

showed no tendency toward ulceration. The patient had left hemianæsthesia and diminution in the field of vision of the left eye."

These four isolated cases are therefore all that apparently have been recorded which throw much light upon the latest example now before us; and in closing, I want again to reiterate my opinion that we cannot place this unusual group of symptoms under any of the well-recognized forms of disease, but must content ourselves by styling it simply a cutaneous manifestation of hysteria.

REFERENCES.

[1] Van Harlingen. "The Hysterical Neuroses of the Skin." *Am. Jour. Med. Sci.* July, 1897.

[2] Bettmann. *Deutsche Zeitschr. für Nervenheilk.* 1900, Vol. XVIII, p. 345.

[3] Tommasoli. *Jour. des Mal. Cut. et Syph.* 1895, p. 449.

[4] Pick. *Wiener Med. Presse.* 1880, p. 183.

[5] Routier. *La Semaine Méd.* 1888, pp. 416 and 428.

[6] Kaposi. *Wiener Klin. Wochenschr.* 1890, No. 22, p. 425.

[7] Galton. *Brit. Med. Jour.* June 13, 1891.

[8] D. W. Montgomery. *Occident. Med. Times.* Oct., 1891.

[9] Duhring. *Internat. Med. Magazine.* 1892, p. 140.

[10] Róna. *Festschrift Kaposi.* 1900, p. 209.

[11] Augagneur. *La France Médicale.* 1887, Vol. I, p. 745.

[12] Bondet. *Lyon Médical.* 1893, p. 20.

[13] Du Castel. *Annales de Dermat. et de Syph.* Jan., 1902, p. 32.

DESCRIPTION OF PLATES.—Dr. C. J. White's Article.

FIG. 1. Low power. In the middle of the photograph is shown the destruction of cells in the follicular walls with dilatation of the follicle. On the right can be seen the rarefaction of the corium due to œdema.

FIG. 2. High power. Here is shown more in detail the disintegration of the follicular walls and the invasion of cells—mostly lymphocytes. Above, one sees the normal rete cells.

DISCUSSION.

Dr. E. B. BRONSON was very much interested in both of these papers, but inasmuch as he would have something to say upon the subject of gangrenous lesions of the skin in connection with the paper which he expected to present the following evening, he would defer remarks until that time. There was one point, however, suggested by Dr. White's paper, to which he would refer and that related to the importance of not being bound by fixed ideas of the etiology. In Dr. White's case there were many indications pointing to an artificial eruption, but he could discard them all after a very careful investigation. In studying these cases

we should bear in mind that in hysterical patients there was often a peculiar vulnerability or sensitiveness of the skin which was absent in the normal individual. The same was true in regard to the production of pressure gangrene in decubitus. The pressure alone would be insufficient to produce gangrene but for the patient's general condition. There was no doubt that in many of the skin lesions occurring in hysterical subjects an element of deceit was present, but at the same time it took only slight provocation (only a slight injury) to produce very surprising effects.

Dr. Gilchrist said that it was not infrequently the case that when we could not classify an eruption or make out its cause we called it neurotic. It recalled to his mind a rather interesting case that came under his care in Baltimore. The patient was a girl about sixteen, very robust. She was the daughter of a country judge, and had enjoyed every advantage. She presented peculiar lesions on the left forearm and a few on the right arm. Encircling the left wrist was a remarkable keloidal growth, like a bracelet. She had several atrophic scars over the forearm, and one lesion which was necrotic. He diagnosed the case as one of hysterical gangrene, but was rather sceptical about the spontaneous origin of the lesions, especially those on the left arm. He asked the mother whether the girl could possibly have produced them herself, and warned her to carefully watch the young lady's movements in the future. Five or six months later she came back with a lesion on the second finger of the left hand, which had appeared on the previous day. The girl complained that this lesion was painful. It became necrotic and extended down to the bone. The mother informed him that she was quite positive the lesions had appeared spontaneously. The girl was undoubtedly hysterical. She developed aggravated hysterical symptoms, and subsequently became slightly unbalanced mentally. The last time he saw her, about two years ago, the keloidal scar encircling the wrist had entirely disappeared. The other atrophic scars were less marked, and the scar on the finger had also healed. A section removed from the margin of that lesion showed nothing positive. Apparently, the lesions appeared by themselves, without the use of any local application. At the present time the patient was no longer hysterical, and no further lesions had appeared.

Dr. F. J. Shepherd wished to emphasize his former views in regard to this subject. By careful observation he had so frequently detected the practice of self-infliction of injuries in these cases, that he should be very skeptical about the spontaneous origin of these gangrenous or bullous lesions. He agreed with Dr. Bronson, however, that there must be some peculiar vulnerability of the skin of these patients, as he had seen a bullous eruption produced by a hot water bag applied to the skin. In regard to the method of deception resorted to by some of these patients, he recalled one case where the lesions were produced by the application of a lighted cigarette.

Dr. James C. White thought that there was no doubt that even these deep-seated lesions of the skin, which we were prone to look upon as evidences of malingering, might occur spontaneously. We knew that marked physical changes in the skin might occur without external agencies of any sort. We knew that a hysterical, nervous person, man or woman, might develop an urticaria as the result of fright, and we also knew that such urticarial changes might be followed by the development of bullæ. Dr. Hardy had reported the case of a student in his clinic who immediately developed an attack of urticaria whenever he saw such a case or even read about it. There was no doubt that nervous disturbances might lead to these physical changes. He once saw a young girl with a patch of gangrene on the forearm, about two or three inches in extent. It was reported to have recurred repeatedly. She was taken into the hospital, where the surgeons excised the patch. She returned home, but subsequently returned with a similar attack. She was then placed in a room and watched continuously, so as to exclude the possibility of self-infliction, but in spite of every precaution, the whole process repeated itself within four days. He believed that it was not a case of malingering, and we must accept the fact that mental impressions may produce marked physical changes in the skin.

Dr. M. F. Engman said that while we knew that most of the eruptions occurring in hysterical individuals were probably feigned; yet why should we say that an eruption was self-produced because it was peculiar and occurred in hysterical individuals? The progress of Dr. White's case seemed to indicate that the cause of the eruption was other than an external one. In feigned eruptions there was a feature that he had not seen commented upon, and that was the psychopathic sexual feature. Some years ago he had a young girl under his observation who produced a feigned eruption by burning herself with pure carbolic acid for the purpose of exciting an orgasm.

The President, Dr. Bowen, merely wished to add that he was inclined to sympathize a good deal with the views of Dr. Shepherd. At the same time, he thought it had been shown that some of these eruptions in hysterical persons were not self-inflicted. He had the opportunity of seeing the case reported by Dr. White, and it was certainly remarkable. At that time it was very difficult, almost impossible, to exclude malingering. He thought, on the whole, that the doctor had made out a pretty good case, but hardly proved it.

Dr. van Harlingen greatly enjoyed listening to Dr. White's paper. The case was certainly very carefully investigated, and was particularly interesting because he called in the assistance of a neurologist. He thought if we came a little closer to our friends, the neurologists, in regard to these cases, we might get some assistance. During the past four years, most of the cases he had seen were reported in neurological

journals, and the distinction had generally been pretty clearly made between the spontaneous cases and the artificial ones. Formerly, these cases were reported as cases of malingering, and more recently as feigned eruptions, but as we learned more about the peculiar mental state of the hysterical, we came to find out that there was a certain unity running through them, by which we could differentiate between those caused by disease, those attributable to demi-simulation, and those produced for the purpose of exciting sympathy or in order to escape certain duties. If any one who was sceptical would carefully read the best of the cases reported, he would arrive at the same conclusion that the author had come to, namely, that there were certain cases in which the eruption was the result of some internal cause and was not produced by the patient. All these cases belonged to the class of vaso-motor disturbances, which embraced dermographism, erythema, urticaria, bullous eruptions and hemorrhages from the skin. There was a distinct class of hemorrhages from the skin that were connected with hysteria, some of which began very much like the bullous lesions described by Dr. White in connection with the case he reported.

Dr. Gilchrist wished to ask Dr. White if he made any cultures or smears, and if there possibly was a toxic origin from indigestion?

Dr. Charles J. White: (Closing the discussion). No bacterial examination of the contents of the bullæ was made. The patient gave no symptoms of indigestion, although that ailment may have been present without giving rise to any symptoms.

He did not see why we had not a right to say that certain people might have certain lesions arising from hysteria. We knew that certain stimuli would produce a blush, which meant a dilatation of the vessels. If this dilatation went beyond a certain point, we got œdema, and if this condition was continued over a certain length of time we might have necrosis and gangrene. He did not see why we must invoke any outside agency or any suspicion of malingering when we had a perfect right to assume that such bullæ might arise from internal causes. Another significant point in connection with these cases was the power of regeneration possessed by the skin. After the lesions had disappeared in his case, the skin was apparently perfectly normal within forty-eight hours. This did not occur after a burn of this degree and it showed that we were dealing with a peculiar skin. On the other hand, he would like to ask Dr. Van Harlingen by what signs he could be guided when he wished to eliminate the possibility of malingering in cases of hysteria? Given an eruption like this, which did not show any signs of having been artificially produced, what guide had he to go by in making the diagnosis? How could one be positive that the lesion was produced by self-infliction? The lesions in this particular case were so unlike anything of an artificial nature that he excluded malingering. The patient disappeared after he tried to get a photograph of her.

BOSTON DERMATOLOGICAL CLUB.

The last meeting of the year was held on Tuesday evening, April 28, with Dr. C. J. White in the Chair.

A Case of Acnitis.

Dr. C. J. White presented a Russian Jew, aged 35, who had nothing in his past history bearing upon the present dermatosis. He had had smallpox sixteen years previously, which had left characteristic pits upon his face, but apparently the disease was limited in severity, for there were no scars visible on other parts of the body. No signs of tuberculosis or the para-tuberculoses could be found, and close questioning could elicit no history of this disease in the patient or in any of his family.

The present eruption began in December, 1902, and three weeks later the man was examined by Dr. James C. White, who made no definite diagnosis, but recorded that the lesions were then follicular. In February the case came under the care of Dr. C. J. White, and then appeared as small, round, firm, red papules closely aggregated on the alæ and tip of the nose, and more scattered on the sides of the face and on the forehead. Some of the lesions were surmounted by pustules. At this time the disease resembled an acne or an iodide eruption, but the man stoutly denied the taking of any medicines.

On April 13 the patient was seen again, and a decided change had occurred. All the lesions on the forehead, nose, cheeks, temples and through the beard had increased in size and had become irregularly round or oval, flattened on top, but did not show any real umbilication. Many of the lesions were softer and were assuming an "apple-jelly" hue, simulating exactly in size, color and consistency nodules of lupus vulgaris, but they exhibited no tendency whatever toward coalescence. A few of the papules had apparently not degenerated to the same extent as their neighbors, and appeared blue-red in color and somewhat harder in consistency.

For examination one of these blue-red papules was excised with the idea that this lesser degree of degeneration would offer a better field for diagnosis, but we were disappointed to find that on grasping the partly excised nodule with the pincers the piece collapsed, giving forth a caseous semi-purulent mass. After preparation in paraffin the microscope showed, however, that enough tissue remained for partial investigation, and that the upper part of a cyst wall, with its adjacent tissue, was present, while the rest of the cyst and its contents had been broken up by our manipulation. Serial sections demonstrated that the cyst wall was connected with the rete, whether by the intervention of a follicle or not, the damaged condition of the specimen prevented us from ascertaining to our satisfaction.

Epidermis. Overlying the cyst, the stratum corneum is distinctly

thickened, and consists of dense, straight bundles, rather amorphous in structure, and in places basophilic. The stratum granulosum is totally absent. The stratum spinosum is rather atrophic, the basal layer wanting, and the more superficial cells become immediately flattened and often loose their nuclei so that in the upper two or three layers many of the cells are entirely a-nuclear. These characteristics apply to the epidermis immediately above the cyst, and result, probably, from the pressure exerted from below. The epidermis in other parts of the sections is practically normal, and in places dips down into the corium.

Corium. Papillæ are universally absent. In addition to the rete down growths there are numerous follicles, some of which are much dilated and filled with keratinous material, while others contain hair shafts. Immediately subjacent to the rete there is a comparatively normal, loose, connective tissue containing scattered lymphocytes, and in places elacin. Below this level, separated by the rete down growths and by the follicles, we come to the cellular masses, which are abundantly present and which make the picture a very complex and difficult one to interpret. In places these masses consist of closely aggregated lymphocytes and epithelioid cells; in others there are very numerous small and large giant cells; in one or two instances there are whorls of epithelial cells, such as one sees in epitheliomata; while scattered between all these various cellular masses one sees frequent, newly-formed capillaries. These infiltrating cells apparently bear no definite or constant relationship to one another, so that one does not feel justified in making a positive diagnosis of tuberculosis, although, after studying the case clinically and microscopically, one feels inclined to do so.

Dr. Harding thought that this case belonged in the class with acne necrotica, or acnitis, but the presence of lesions in the scalp would rather exclude the former disease. He thought also that many of the lesions suggested hydrocystoma.

Dr. Bowen did not know exactly where to place the case, and felt that the diagnosis would have to depend on microscopical examination, but, judging from clinical appearances alone, he was inclined to look upon the disease as allied to tuberculosis. As to lupus vulgaris, he thought that the history made such a decision improbable, although the individual lesions bore a close resemblance to lupus nodules in their evolution and in their yellowish appearance. With regard to the chances of this affection being one of the tuberculides, Dr. Bowen thought that it did not resemble any of the few examples of this class which he had seen. The form described as acnitis had, perhaps, a closer resemblance to this case than any of the other types described.

A Case for Diagnosis.

Dr. C. J. White showed a ringed lesion on a man's hand which appeared as a broad circular band of dark red, infiltrated skin of uniform

consistency. The man had been treated by another physician with ointments externally and iodide of potash and Donovan's solution internally, so that the surface had become smooth and the infiltration distinctly less, but improvement had stopped here, and the lesion had not disappeared after thorough medication with the usual anti-syphilitic remedies.

The general sense of the members present was that the disease was probably syphilis, despite the fact that the lesion bore some resemblance to tuberculosis and had not completely disappeared under treatment.

Dr. J. T. Bowen showed a case of **Recurrent Desquamative Scarlatiniform Dermatitis** that had shown a remarkable periodicity.

The patient was a girl of 20, of good family history. According to her account the first attack occurred when she was two years old, and came on in November, lasting until the following April. This recurred every year until she was 14 years old—i. e., from the age of 2 until 14. In short, a desquamative dermatitis of the entire integument began each winter in November and did not disappear until April. At the age of 14 the attacks ceased until the present year, when she is 20 years old, and has had another attack beginning as usual in November, and now tending to improve. At the beginning of the attacks there is always considerable swelling and usually some fever, with chilly sensations, but no distinct chill. The erythema and scaling are always absolutely universal, and there has never been any exudation. Several times the beginning of an attack has been taken for scarlet fever, and once she passed through an undoubted attack of the latter disease.

At the present time there is a general erythema, slight thickening of the skin, and some accentuation of the follicles in places. The hair and nails are not essentially affected, but the latter show at present some hyperkeratosis subungualis.

The urine at the last examination was normal in color, specific gravity 1016, without sugar or bile pigment, and contained a slight trace of albumen and some vaginal epithelium.

The blood count revealed no leucocytosis, hæmoglobin normal, polynuclear neutrophiles 68.26%, small lymphocytes, 19.23%, large lymphocytes 4.8%, eosinophiles 4%, and transitional forms 3.71%.

Dr. McCollom considered the case interesting from the fact that the desquamation was so abundant, and it reminded him of a case he had had in his wards at the Boston City Hospital. A young man was sent by his physician with the diagnosis of scarlet fever. He had no throat symptoms, but a severe general dermatitis and a rise of temperature. The patient was isolated and later desquamated. A few weeks later a similar attack developed, and on inquiry it was learned that the man had experienced the same conditions two years previously and had had a second attack within four or five weeks.

Another interesting feature of the present case was the absence of

any break in the skin at the finger tips, which Dr. McCollom looked upon as so identified with the desquamation of scarlet fever.

Dr. James C. White thought that one must place this case in the so-called dermatitis exfoliativa group, although there was a greater degree of infiltration in the palms of the hands than was usual.

Dr. C. J. White agreed with the last speaker that the palmar lesions seemed very deep for dermatitis exfoliativa, and pointed out also the presence of the follicular plugs on the backs of the fingers, which writers consider as pointing toward pityriasis rubra pilaris. He was inclined to make the diagnosis of erythema scarlatiniforme.

Dr. Bowen said in conclusion that to him the most interesting feature of the case was the occurrence of the eruption at the same time every year, coming as it did in November from the time she was two years old until she was fourteen years of age. It seemed to him that there was no question but that this was a case of dermatitis exfoliativa of the recurrent desquamative, scarlatiniform type, but the persistency and the great regularity of recurrence was very unusual, and he had no knowledge of similar cases in this class of diseases.

A Case of Koilonychia.

Dr. J. S. Howe showed a young woman in good health, who had never had any general or cutaneous disease, so far as she knew, which could account for the condition of her nails. The change in her nails began three years ago and affects the thumb and forefinger of each hand only. The nails appear very much thinner, turned up at the free edges, deeply hollowed in the center and uneven, being crossed from base to tips with raised ridges. There is no paronychia or any localized inflammation of the skin to be found.

Dr. James C. White made the diagnosis of "spoon nails," but was at a loss to account for the changes present.

Dr. C. J. White said that in his experience it was very rare to find the etiological factor in cases of koilonychia, but that some deep and obscure nervous disorder was often at the bottom of these cases.

Dr. Howe wished to emphasize the symmetry present in this example of koilonychia.

Dr. J. T. Bowen brought forward a woman, the subject of Myxœdema, with a large and unusual-looking ulcer upon her thigh.

The patient was forty-seven years of age, married, and a housekeeper by occupation. One year ago severe headaches began, and the woman gained weight and the skin became dry. Micturition increased, the feet and hands became œdematous, and she could not read for three months. She was treated for Bright's disease. Facial paralysis then developed, the memory grew poor, and the hair did not fall out, but appeared dry.

Examination showed that the skin was dry and puffy-looking. The

eyes reacted to light and accommodation. The tissues felt brawny and infiltrated over the whole body. There was a slight enlargement of the thyroid gland. The nails were not especially rough. The speech was thick and slow and the memory characteristically defective.

On questioning, the patient gave the following history of the ulcer on her thigh. She was never pregnant until three years ago, and as a result she suffered a miscarriage at four months. There was never a rash upon her body. At a subsequent period she gave birth to a son, who is now a consumptive and has an ulcer about his ear. The woman has also lost a brother of pulmonary tuberculosis. The ulcer on her own thigh began four years ago after pain and soreness in this region following some intestinal affection. Since then the ulcer has been three or four times entirely healed, but soon after the skin has broken down again. At present there are multiple ulcers, crescentic and serpiginous, with rather soft, but not undermined edges. Connecting these irregularly-shaped ulcerations are bridges of brown-red scar tissue. The ulcers are not deep, and the floors are composed of healthy-looking granulations.

Dr. James C. White considered the ulcer to be of tuberculous nature.

Dr. C. J. White favored the diagnosis of syphilis, because the woman was never pregnant for many years after her marriage and because a final pregnancy resulted in a miscarriage.

Dr. Howe wished to regard the case as one of tuberculosis.

Dr. Post thought the ulcer a very curious-looking one and did not want to make any positive statement in regard to its nature, but of the two diseases, syphilis and tuberculosis, he would prefer the latter as an etiological factor.

Dr. Harding was inclined toward the tuberculosis theory, and, on account of the history of pain, thought that perhaps one ought to consider the possibility of the presence of epithelioma also.

Dr. Bowen said that to his mind there were more of the characteristics of tuberculosis present than of syphilis, but the question might arise as to whether a tropho-neurotic element in some way connected with myxœdema was not at the bottom of the ulcerations.

Dermatitis Caused by Mosquitoes.

Dr. J. S. Howe presented a man of 23, who came to this country from England about one month previously. Three days before the meeting he awoke to find his left eye closed and the left side of the face very much swollen and reddened. At present he has on the left cheek four rounded nodules about the size of a ten-cent piece, two of which are capped by bullæ about the size of a split pea. The other two nodules are covered with a crust, the remains of bullæ which have been ruptured. The left side of the neck is covered with about twenty reddened papules, considerably raised and varying in size from a pea to a buckshot. On the

middle finger of the left hand is a raised, erythematous area the size of a ten-cent piece, and there are also three similar lesions on the wrist and left forearm.

Dr. James C. White looked upon the case as an example of mosquito poisoning in a recent immigrant. The fact that the lesions appeared on the face, arms and fingers—the exposed parts—was very suggestive of some insect's bite.

Dr. Harding suggested the possibility of bedbugs as the causative agent.

Dr. Bowen agreed with Dr. White's diagnosis.

Dr. McCollom thought that there was no doubt that the mosquito was the cause of the poisoning, and said that he had several times been called upon to decide whether similar lesions were not due to the presence of smallpox. He believed that the fact that the man's sleeping room in a small town was dark and damp would account for the presence of mosquitoes at this rather early season of the year.

Dr. C. J. White believed in the mosquito origin of the lesions, and stated that in his experience at the Massachusetts General Hospital in the summer months he frequently had the opportunity of seeing similar cases, which, as a rule, occurred in recently arrived Irish girls.

A Case of Dermatitis Medicamentosa Due to the Ingestion of Arsenic.

Dr. C. J. White showed a young woman, 22 years of age. Two years previously she had an outbreak of "lumps," which appeared on the forearms. These "lumps" broke out at night and disappeared mostly by day. During the succeeding month similar lesions appeared and gradually spread to the trunk, lower limbs and face. The disease retained the same character for a year, when the patient consulted a physician, who prescribed medicine internally and washes and ointments externally. During the next five months the patient continued to take the internal medicine, but the disease remained unchecked. At the end of this time she noticed a decided roughness of the hands, arms and legs, which later involved the whole body. Associated with this roughness appeared a universal, fine, brawny exfoliation, and two months later the young woman observed for the first time on her abdomen a brown discoloration, which soon spread to the thorax and neck. At present the palms of the hands were thick and yellow and covered with a fine, abundant, desquamation—features which were present elsewhere, but to a lesser degree. The melanoderma appeared as large, extensive areas of a full chocolate hue. This discoloration was particularly noticeable on the neck at the collar line, and was in large, irregularly shaped patches.

Dr. Harding considered the case as one of arsenic poisoning, and spoke of the marked pigmentation and keratosis.

Dr. Bowen, who had examined the case in conjunction with Dr. White, said that at first he had felt confident that the patient had had eczema, or possibly universal desquamative dermatitis, which had been treated with arsenic for a long time, and had begun to show an arsenical pigmentation and keratosis. What the "lumps" signified he did not know, as the patient had not mentioned them in her previous interviews.

Dr. McCollom considered the previous outbreaks of "lump" as indicative of urticaria, and he further remarked that he could not understand the tolerance of arsenic of some people's stomachs.

Dr. James C. White said that he regarded the lesions as evidences of arsenical intoxication, except that he could not account for the unusual desquamation, as there was no evidence of any previously existing generalized lesions.

Dr. Howe diagnosticated the case as one of arsenic poisoning, and referred to the lumps as evidences of chronic urticaria.

Dr. C. J. White stated that he had asked the patient to come, as she seemed to show so well the various changes which arsenic could produce in the human skin. He also wished to draw the attention of the members to the fact that this melanoderma of the neck was much darker and appeared in larger areas than is the case in leucoderma syphiliticum.

The society then adjourned to meet again in October.

Charles J. White, Secretary.

ABSTRACTS.

A Contribution to the Theory of the Pathogenesis of Condylomata Acuminata. Max Juliusberg. (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 163.)

In the description of the histological changes of condylomata acuminata two points are usually emphasized: the presence of a large number of hypertrophied papillæ and that the connective tissue of the papillæ are covered with thick hypertrophied layers of epithelium. From the drawings and descriptions of the histological changes the idea seems to be conveyed that the epithelial layers have in every part, if not an even, at least a considerable thickness. The writer made consecutive serial sections (1,000) of condylomata acuminata and found that while in the upper layers the epithelium is thick and uniform, the middle sections are entirely deprived of epithelium, having instead a plug of leucocytes, the lower sections regaining their epithelium. This fact suggests to him a clue for the patnogenesis of the condyloma which was advanced by Weigert, namely, that the places where the epithelium is absent were primarily injured and the injury removed the power which kept in check the latent inborn capacity of the cells for growth.

All endeavors to find tinctorially bacteria in the place of supposed injury failed. No cultures were made.—Lapowski.

A Case of Voluntary Erection of the Human Hair. S. S. Maxwell, (*American Jour. Physiology*, 1902, July.)

Cutis anserina, or "goose-flesh," is usually regarded as a reflex phenomenon caused by the contraction of the smooth muscle fibers attached to the hair

follicles. This contraction may be caused by exposure to cold, by the emotions, or by mechanical stimulation of certain regions. The response to mechanical stimulation varies much with different individuals: in some persons the "goose-flesh" is confined to the region that is stimulated; in others it may extend over the whole body. There is great difference, also, in the individuals in the readiness with which cold causes "goose-flesh," and this is also true of the emotions. A case is cited of a woman who could not listen to pathetic music without a continuous attack of "goose-flesh."

The case recorded is the first, so far as is known, of direct voluntary control over the *arrectores pilorum*. The subject was a young man of twenty-seven, a student, who became aware of this peculiarity at the age of twelve. He had a curvature of the spine, dating from his fifth year, and he also had an impairment of hearing, as well as being color-blind to red. He cannot, however, be classed as a neurotic. He can produce the condition of "goose-flesh" at will in from two to ten seconds from the instant of volition, and can cause it to disappear in a like time. It is seen on those parts of the body where it usually appears when the skin is exposed to cold, being especially prominent upon the hips and thighs, the back and arms. There is no change in color, except, perhaps, a very slight pallor. Where the hairs are comparatively large, as on the fore-arms, they can be seen to become partially erect in a very marked way. It is to be noted, also, that this subject has great control of his facial muscles, being able to move his scalp freely in various directions, as well as his ears; he also has much greater control of the muscles of his fingers and toes than the ordinary individual. These attributes were also possessed by the subject's father. One might be reminded of those persons who possess the power of quickening the heart-beat at will, but this patient is possessed of no such power.

"Goose-flesh" may sometimes be produced by imagining a chill or some horrible scene; but the patient, who has studied himself closely, declares that such is not the case with him, and that he merely wills the contraction of his muscles for the production of "goose-flesh." The erection can be prolonged for many minutes, but after a time more effort is necessary. It was found by experiment that the erection of the hairs was invariably accompanied by a contraction in the blood vessels of the skin, which accords with Langley's observation that erection of the hairs in the cat is accompanied by contraction of the arteries. It was also found that a dilatation of the pupil occurred during the period of erection, most marked at the beginning. There were some modifications of the respiratory movements. A microscopical examination of a piece of skin excised from the thigh showed the arrectores to be made up of the ordinary plain fibers, with no signs of striation. —Bowen.

A New Type of Sarcoid Tumor of the Skin. C. Rasch and F. Gregersen. (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 337.)

A woman of thirty-three years had on the dorsal aspect of the left index finger a small whitish tumor in the skin, which she destroyed by the application of nitric acid. A round white scar remained in the place of the tumor. Six years later new tumors, similar to the previous ones, appeared on the fingers of right hand. They started as very small elevations in the skin, some growing to the size of 1 cm. in diameter, some disappearing without leaving any marks of their previous existence. No subjective symptoms were associated with the tumors. All the tumors were of hard consistency, whitish or yellowish white in color, with a smooth surface and freely movable with the skin. A year later the patient reported that all the tumors, which in the meanwhile grew larger, suddenly disappeared in a few days without leaving any marks, after a severe attack of fever of an uncertain

origin. The microscopical examination of an excised tumor showed that it belonged to the group of connective tissue neoplasms, with cell proliferation in the perivascular (perithelial) lymph spaces, although the participation of the connective tissue cells, outside of the vessels, in the formation of the tumor could not, with certainty, be excluded. The tumor was mostly limited to the pars reticularis of the skin, did not form a sharply defined tubercle, but although it showed a tendency to infiltrate the surrounding tissue, it never went beyond the papillary layer.

The writers find similar cases described by Dubreuilh and Galloway and classify their case as a benign sarcoid growth of the skin.—Lapowski.

The Histological Changes in the Skin Affected with Lupus after the Application of Finsen's Method. H. E. Schmidt and Bernhard Marcuse (Lesser's Clinic). (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 322.)

Skin sections obtained from three patients who suffered with lupus formed the basis of the investigations of the writers. The affected portions of the skin did not present microscopically either ulceration or inflammatory changes before the application of the rays.

The portions of the lupoid skin exposed to the action of the rays presented microscopical changes which corresponded with changes found in smaller healing lupoid islets of skin taken from another patient not exposed to the action of the rays. These changes start upon the surface and slowly reach the deeper tissue; only the mononuclear round cells resist the action of the rays longer than any other cells. The epitheloid cells are destroyed after several exposures. Simultaneously a diffuse inflammation of the skin occurs with enlargement of vessels, migration of polynuclear leucocytes, which penetrate both the epidermis and the lupus tissue. Giant cells remain usually intact. Cosmetically it is important to know that the stratum papillare, the stratum corneum and stratum granulosum are well preserved, even in places where the epithelial cells underwent necrosis. According to the writers' findings the healing process after the use of Finsen's rays is due to the direct impairment of the same cells by the rays and to the active inflammation, which is very intensely developed in the immediate surroundings of the lupoid infiltrations.—Lapowski.

A Case of Blastomycosis. James H. Sequeira. (*Brit. Jour. Derm.*, April, 1903, p. 121.)

Sequeira's case of blastomycosis is the first observed, or at least, reported in England. The patient, a healthy man, aged 37, with excellent family history, free from tuberculosis, and whose occupation had to do chiefly with the farm and cattle. Several areas of disease presented. Below both lower eyelids towards and encroaching upon the inner canthus there was a slightly raised, irregular, thinly crusted swelling, about an inch in length and a half inch broad; freely movable and without surrounding infiltration. The growth on the right side was somewhat larger than that on the left. On pressure a thin, whitish, somewhat offensive discharge could be squeezed out from under the crusts. There was no tenderness or pain, but there was slight itching. There were some smaller lesions near by, and a small growth, about the size of a filbert, upon the scalp near the middle line. The smaller lesions were whitish, the larger being brown or reddish. The malady had first presented itself about eighteen months previously as a small white spot below the inner canthus of the left eye; the lesion under the other lid appeared five months later, and the others, including the scalp growth, somewhat later at intervals. The microscopic findings were about as those detailed by Gilchrist, Hyde, Montgomery and others. The yeast bodies, which, however, were much smaller than those noted by the observers mentioned, were found in the

discharge and in the sections; attempts to cultivate the organism were negative, due, the writer believed, to the fact that the lesions examined were already infected with cocci. Under the administration of potassium iodide marked improvement resulted, but there was but little effect shown before the dose reached 105 grains daily. The patient left the hospital before a final result was reached. The paper is illustrated with cuts showing the case and section of the tumor, and with a drawing of the organism.—Stelwagon.

The Comparison of the Gigantic Naevus of the Scalp with Other Tumors of the Hairy Scalp. Magnus Moller. *Arch. f. Derm., u. Syph.*, 1903, LXIV., p. 199.)

The chapter of benign tumors of the scalp is a very interesting one in dermatology. On the scalp we meet with tumors which macroscopically look alike, while their microscopical structure is varied, presenting endotheliomata, cylindromata and sebaceous adenomata. The writer reports a case which, clinically, could be accepted as one of the foregoing tumors, while microscopically it proved to be a nævus. It occurred in a seventeen-year-old boy who had the tumor on the scalp since birth. Before the operation the tumor occupied the scalp and a large portion of the neck. No line of definition could be drawn, as small tumors were scattered over the scalp. A review of the literature of the subject is added to the paper.—Lapowski.

Arsenical Cancer. Darier. (*Ann. de Derm. et de Syph.*, 1902, Dec., p. 1121.)

Darier presented a curious instance of this trouble at the meeting of the French Dermatological Society in December, 1902. The patient was first seen in April, 1890, a man of thirty-five, of distinctly nervous temperament. He had first noticed, a year previously, a rough condition of the backs of his hands, which had a violet tint and had persisted. Four or five months later warty growths developed upon the palmar and plantar surfaces, and pigmentation also developed on the neck and forehead. This pigmentation was in the form of small macules, varying in color from yellowish to a deep brown; in some places confluent. There were also, together with the pigmented patches, vascular areas, due to fine capillary enlargement, scarcely visible with a magnifying glass. The palmar surfaces of the hands and the fingers were dry and covered with numerous cornified, wart-like bodies of a yellowish color. There was also a diffuse hyperkeratosis of these parts.

The diagnosis at this time was uncertain. There was an extraordinary resemblance of the neck and face to the condition found in xeroderma pigmentosum, the cutaneous atrophy and scars alone being wanting. In 1902 the patient presented himself again at the hospital. At this time there was a general pigmentation of the trunk, as well as the back and thighs. The pigmentation of the neck and face, however, had almost disappeared. On the palms and soles there was a diffuse hyperkeratosis, with numerous wart-like growths. Two of these warty growths on the right hand had become ulcerated, painful, and bled readily. A small ulcerated tumor, covered with a crust, was also to be seen on the right side of the neck, which had every appearance of being an epithelioma. There was also an ulcerated lesion on the palm of the right hand and at the base of the index finger. A microscopical examination of the tumors showed that they were, in fact, unquestionably epitheliomata. The growths of the hands and neck were then curetted and their bases cauterized with the galvano-cautery. About the same treatment was used for the warty growths.

The diagnosis was finally cleared up by the discovery that the man had taken since 1886 Fowler's solution regularly and with great persistence. From 1886 to 1896 he took twelve drops a day for about twelve days each month. From

1897 to 1901 he took the drug only seven days each month on account of lacrymation and conjunctivitis. From this discovery it was considered certain that the dermatosis was due to the arsenic.

The melanoderma, as is known, is comparatively common, and may be either macular or diffuse and be situated on the trunk, limbs, neck, and rarely on the face. The small size of the spots in the case under discussion is a little unusual, as are also the vascular lesions. The hyperkeratoses were very typical in appearance. The special interest in this case consists in the appearance of the epithelioma. Hutchinson, in 1887, published three cases, and made several communications on the subject, which were received with considerable skepticism. A number of cases of psoriasis which had been treated a long time with arsenic were observed to develop epitheliomata on the hands and feet. In the epidemic of arsenical poisoning that occurred in Silesia, Geyer mentions four or five cases of cancer of the skin. The prognosis of these cases is not particularly favorable, as in many cases the growths have persisted and progressed. As a paradox, it is noted that Fowler's solution has been recommended for the cure of cancer of the skin, as well as local application of arsenious acid.—Bowen.

"Pseudoxanthoma Elasticum" and "Colloid Degeneration in Scars." Emma Dubendorfer (Professor Jadassohn's Clinic. (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 175.)

The case reported by the writer is the fifth published, and its importance lies in the age of the patient affected, the disease being noted in a boy of seven years, where senile changes of the skin were out of the question.

The upper region of the left buttock was the site of longitudinal lines and spots.—Lapowski.

Dermatitis Psoriasiformis Nodularis (*Pityriasis Chronica Lichenoides*). T. M. Himmel (Jadassohn's Clinic). (*Arch. f. Derm. u. Syph.*, 1903, LXIV., p. 47.)

The case reported by the writer is the ninth published. It occurred in a young girl of twenty-six years. The beginning of the disease was characterized by small sized, red, elevated, scaly tubercles. The thickness of the tubercles gradually disappeared, the color paled, the elevation subsided to a level with the skin, sometimes presenting a slight depression in the center. The tubercles did not coalesce and only rarely itched. Histologically they presented an infiltration and a parakeratosis. After considering critically the other published cases the writer pictures a differential diagnosis between the foregoing disease and parakeratosis variegata (Unna), and accepts dermatitis psoriasiformis nodularis (Jadassohn) as the proper name, against pityriasis chronica lichenoides (Juliusberg).

Jadassohn considers the relationship of this disease to Brock's parapsoriasis.—Lapowski.

A Contribution to the Pathogenesis of Psoriasis. H. Heidenfeld (Kaposi's Clinic). (*Arch. f. Derm. u. Syph.*, 1903., LXIV., p. 359.)

The writer gives a clinical history of a case where an acute anterior poliomyelitis of the left lower extremity was associated with psoriasis vulgaris. The poliomyelitis dated from childhood (the patient is forty-nine years old), while the psoriasis was only in existence one year.

The whole trunk and the extensor surfaces of the arms were evenly covered with a psoriatic eruption. But upon the lower extremities there appeared striking differences in the localization of the eruption. The extensor surface of the right thigh was almost covered with numerous efflorescences, while only the upper external and posterior halves of the left thigh were affected with psoriasis in a very

slight manner. The right leg was entirely covered by psoriatic lesions, while the left leg was free. Thus the affected left thigh and leg were comparatively free from psoriasis, while the unaffected right extremity was extensively involved. The case seemed to show a connection betwen psoriasis and impairment of the spinal cord;—that a disturbance in innervation, probably of the vaso-motors, prevented a breaking out of the psoriatic eruption; that a normal nerve conduction (*Nervenleitung*) is essential to the appearance of the psoriatic lesions. Upon the paralyzed limb psoriasis may appear, but there seems to be lacking the congenial soil for further development.—Lapowski.

Psoriasis Following an Injection of Anti-Diphtheritic Serum. M. de Beurmann and Ramond. (*Ann. de Derm. et de Syph.,* 1903, Feb., p. 139.)

The following case was reported to the French Society of Dermatology on February 5, 1903, by MM. de Beurmann and Ramond. It was that of a chambermaid, twenty-two years of age, who entered the hospital in January of the present year, with the following history. She had suffered from an attack of diphtheria in October of the preceding year, complicated with rhinitis and laryngitis. Upon entrance into the hospital she received an injection of twenty cubic centimeters of anti-diphtheritic serum, which was repeated fifteen days later. Fourteen days after the last inoculation she was seized with acute pain in her arms, chiefly in the neighborhood of the elbow, and an eruption composed of large erythematous plaques made its appearance on the upper arms. At the same time there was a rise in temperature on the first day with general malaise, and articular pains which lasted about four hours. In two or three days the eruption became general, invading the lower limbs, trunk, and finally the face. She continued to experience acute pain. The eruption, as time wore on, changed its appearance, the erythematous character was lost, the eruption became paler, and white, dry and abundant scales appeared. At the end of a week the eruption disappeared almost completely from the face, but persisted upon the body. When seen, the subject presented an apparently typical case of psoriasis, the lesions being very marked about the elbows and knees. Inquiry ascertained the fact that she had had her first attack at the age of eight, which at that time was rather mild, and limited to the elbows and knees; and a second and third attack at the age of sixteen and twenty, respectively. It is believed that it was the serum, not the diphtheria, that caused this outbreak, because the ordinary erythemata that occur after the injections for diphtheria appeared at their usual time, and the psoriasis was consecutive to this erythema. This instance is somewhat similar to those cases where psoriasis has appeared following vaccination.—Bowen.

A Contribution to the Knowledge of Senile Degeneration of the Skin. T. M. Himmel. (*Arch. f. Derm. u. Syph.,* 1903, LXIV., p. 47.)

The specimens of skin for his microscopical examinations were taken from individuals of 2 days, 2, 15, 17, 41, 44, 55, 63, 64, 65 and 78 years old. From his examination he arrives at the conclusion that the main changes in the skin are the undoubted alterations of the collagenous and elastic tissues, especially the changes of the collagenous tissue. The elastic tissue is modified tinctorially and morphologically. Its transformation into elacin may take place in youth.

As to the cause of the degeneration in the skin, the writer brings forward a hypothesis that portions of the skin exposed to sunlight are more hyperæmic, as shown by Finsen, than other not exposed parts. And this hyperæmia may produce a "latent," only microscopically demonstrable, inflammation, and later the above mentioned degeneration.—Lapowski.

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DERMATITIS VENENATA—A SUPPLEMENTAL LIST.

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Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

I DESIRE to place upon record in a collected form for convenient reference a list of the agents which have been observed to produce inflammation of the skin by contact since the publication of my work on Dermatitis Venenata in 1887. Some of them have been already described by me from time to time, of which I will make no farther mention here than to append the date and place of publication:[1]

Among the substances which remain to be more particularly spoken of, there are a few the irritative properties of which have become more or less well recognized, others which are not generally known to be "poisonous," and those which may be best put upon the suspected list until additional data concerning their action upon the skin have been obtained.

A—IRRITANTS GENERALLY RECOGNIZED.

But few words may be said with regard to the irritative properties of the members of this class, as attention has already been called to them by reliable observers.[2] It includes the following:

[1] Primula Obconica: *Garden and Forest,* Feb. 20, 1889; *Boston Med. and Surg. Journal,* May 1, 1890.
Buxus sempervirens: *Boston Med. and Surg. Journal,* Dec. 12, 1889.
"Violet Water": *Boston Med. and Surg. Journal,* Dec. 12, 1889.
Chlorine Gas: *Boston Med. and Surg. Journal,* Dec. 12, 1889.
Pastinaca sativa: *Boston Med. and Surg. Journal,* Jan. 28, 1897.
Hamamelis Virginiana: *Boston Med. and Surg. Journal,* Jan. 28, 1897.
Ostrya Virginica: *Boston Med. and Surg. Journal,* Jan. 28, 1897.
Oleum Cassiæ: *Boston Med. and Surg. Journal,* Jan. 28, 1897.
"Aniline Black": *Boston Med. and Surg. Journal,* Jan. 28, 1897.
Caterpillar of Brown-tail Moth: *Boston Med. and Surg. Journal,* June 13, 1901.
Poisoning by Fur-dye: *Boston Med. and Surg. Journal,* March 6, 1902.
X-Rays: *Boston Med. and Surg. Journal,* Dec. 3, 1896.

[2] Wolters. *Dermat. Zeitschr.,* Bd. IX, Heft. 5.
Cathelineau. *Annal. de Derm. et Syph.,* Tome IX, p. 63.
Brocq. *Bulletin Medical,* 1898, p. 237.

Certain new hair-dyes—

1. Chlorhydrate de paraphenylene-diamine.

2. Aureole, containing metol, amidophenol-chlorhydrate and monoamidophenylamin.

Several instances of severe dermatitis by the above agents have been recorded within the last few years.

The first named is a crystalline substance, soluble in water, alcohol and ether, and is transformed by oxidizing agents into quinone. It is the basis of several commercial pigments. It is sold in solution under various names as a hair-dye with an accompanying bottle of "oxygenated water." Used one after the other upon the hair, a violet black is immediately produced. The inflammation occasionally excited spreads from the seat of application, the scalp, beard, eyebrows or moustache, to neighboring surfaces, sometimes widely, and may assume any grade of dermatitis with much œdema and itching. The eyelids are greatly swollen, and conjunctivitis occurs. The attack lasts from a few days to weeks. The dermatitis may not be produced until several applications have been made.

The second, the so-called "aureole," is also sold in solution with a companion bottle of peroxide of hydrogen. The hair is first to be washed with a solution of soda or soap, and then the contents of both bottles are to be mixed and applied to the hair, which in a few hours assumes a dark-brown color, that may be made darker by repeated applications. In the cases of ensuing dermatitis recorded by Wolters, itching and burning began in a few hours, soon followed by small vesicles and pustules. The inflammation extended over the general surface, and was followed in the fourth week by a universal outbreak of urticaria of a fortnight's duration. Dr. A. D. Mewborn, of New York, gives a full and excellent account (*Journ. Amer. Med. Asso.*, May 18, 1901) of the action of this substance upon the hair and skin, with a complete bibliography of the observations recorded by French physicians.

I have seen two instances of such dermatitis, and cases have been recorded by Elliot and Morrow (*Proceedings of New York Derm. Soc.*, March 25, 1902).

PHENYL HYDRAZIN HYDROCHLORIDE.

Hall describes[3] the case of a chemist who was repeatedly attacked by extensive eczematous dermatitis whenever he conducted experiments upon this substance. On one occasion when spilled upon the hand the

[3] *British Journ. of Derm.*, March 1, 1899.

attack developed primarily upon this spot, but slight exposure to its vapor would often produce widespread inflammation.

ORTHOFORM.

In orthoform we have a valuable analgesic, claimed at first to be innocuous when applied to the skin or mucous membrane. A more extended observation of its action in cutaneous applications has shown, unfortunately, that it is capable in some persons of provoking very serious forms of dermatitis. The most common type of inflammation is an erythema with œdema suggesting erysipelas, rarely advancing to vesicle and bulla formation. Occasionally signs of constitutional disturbance are observed, rise of temperature, headache and nausea. Dubreuilh[4] mentions cases in which gangrenous ulcers resulted from its application. Its poisonous action may follow its application in any form, either upon the sound or denuded skin. I have found it less mischievous than iodoform.

SALOL.

Thibierge describes[5] the irritative action of salol powder upon the skin, when used as a surgical dressing, as similar to that of iodoform, the efflorescence varying in intensity from erythema to bullæ. The same effects may be produced when applied as an ointment. When used as a dentifrice it may excite great inflammation of the lips within and without, which extends to the surrounding skin, and may last indefinitely as long as it is thus employed.

RESORCIN.

This substance produces dermatitis not infrequently when used in any form upon the general surface or scalp. It simulates erythematous eczema in type. Patients should be always directed to use it cautiously at first, and the writer, when prescribing it as a salve for the scalp at bedtime, advises that a nightcap be worn.

In this category may be placed *aristol*, *ichthyol*, *dermatol* and *europhen*, all of which are capable of exciting dermatitis when applied to the skin of some persons.

PYOCTANIN.

This substance, which has been recommended by Hyde as a local treatment in lupus erythematosus, has in one instance in my experience excited an erythematous dermatitis, which extended considerably beyond the area of application.

[4] *La Presse Médicale*, Number 40, 1901.
[5] *La Pratique Dermatologique.*

CREOLIN.

I find the following excerpt in relation to its actions upon the skin:

"Quite a number of cases, according to the *Therapeutic Gazette*, have recently been reported in which more or less unfavorable results have followed the employment of creolin, in the majority of cases the effects being attributable to the phenic acid and its derivatives in this proprietary remedy. In the *Gazette Médicale de Paris*, No. 29, 1890, a report is published of a case observed by M. Borehmeyer of a child, two and one-half years of age, whose finger was crushed between cog-wheels, by which a severely contused wound was produced, which was treated by applications of a one and a half per cent. solution of creolin. On the fourth day the finger was covered with vesicles, both small and large, which ruptured spontaneously, giving issue to a yellowish liquid. The eruption soon disappeared from the injured hand, and, on the removal of the application, a cure was rapidly produced, though the eruption again returned on renewed applications of creolin. So also Dr. Wackez publishes an account of seventeen different surgical cases treated by creolin. In ten of these, union by first intention occurred; in seven the creolin produced eczema, erythema, and vesicular eruptions, and desquamation of the skin in large patches; at the same time the patients had more or less severe constitutional disturbance, and an examination of urine showed that these poisonous effects were attributable to the presence of phenol. It would seem, however, that children are especially susceptible to the deleterious effects of phenol and its derivatives, and hence are more readily influenced by creolin."

IODVASOGEN.

This lately introduced substance has been recommended as incapable of producing any of the ordinary ill-results of iodine compounds, but the following case, reported by Dr. Lipman-Wulf, of Berlin,[6] shows its dangerous character. After its inunction over a bubo for nine days an erythematous inflammation of the overlying skin suddenly arose, terminating in desquamation. A few days afterwards the penis and scrotum became œdematous, and a diffused papular efflorescence appeared upon the abdomen and breast, the papules becoming confluent and forming large, irregular blotches. On the fourth day the upper and lower limbs also exhibited a scarlatina-form inflammation, and finally the face and ears became œdematous. All these changes in the skin slowly disappeared. The subjective symp-

[6] *Dermat. Zeitschr.*, Bd. VI, p. 499.

toms consisted of intolerable itching and general lassitude. Traces of iodine were recognizable in the urine for some time after.

KEROSENE.

In my book on Dermatitis Venenata, I speak of the treatment of lice of the head and pubes by the free and prolonged application of petroleum, and state that I have never seen any irritative action produced by it. The same good character cannot be given to kerosene, so often used for a similar purpose; for I have several times seen an inflammation of the scalp and surrounding areas excited by it in such cases, and similar results, a diffused fine papular dermatitis, follow its domestic use as an embrocation in rheumatism, sprains, etc. General anæsthesia has been occasionally produced by its application upon the scalp.

ELECTRICITY.

I have seen an eruption follow within a few minutes the passage of an electrode from a static machine up and down the arm some three inches from the surface. The skin became thickly covered with erythematous macules the size of a pea at the points of spark contact. Some of the lesions developed into true wheals. The same results followed a second trial a week subsequently.

With regard to the dermatitis produced by the X-rays, briefly mentioned in my report of an early case (see reference above), no farther mention is here needed, as the literature upon the subject is now so extensive. Cases will become more rare as experience with the agent increases.

B—IRRITANTS NOT GENERALLY RECOGNIZED.

The list of substances which have been known to set up a dermatitis only occasionally, or which are not recognized as possessing such properties, is of considerable size, and is continually increasing as the innumerable novel products of the synthetical chemist come to be introduced into therapeutics, and our knowledge of the properties of plants extends.

Brief mention will be made of the following:

"AURANTIA": HEXA-NITRO-PHENYL-AMIN.

This is an orange-colored dye, used to stain leather yellow. According to Crocker[7] it excites a severe dermatitis of vesicular type upon the hands of workmen who use it for staining purposes.

[7] Crocker, text-book, late edition.

COCUS WOOD: GREEN EBONY.

Crocker states in his recent edition that flute-makers who use this wood are liable to eczematous dermatitis. In one of his cases the eruption began two hours after sawing the wood into blocks. Two workmen were simultaneously affected. Crocker says this tree belongs to the *Euphorbiaceæ*, a family of ill-repute, but the Century dictionary states that it is the *Brya* or *Amerimnum Ebenus*, a small, leguminous tree of Jamaica.

I may add that I have treated several furniture-makers for similar inflammation of the hands, who say it is produced by working upon a so-called mahogany, a red, coarse-grained wood, the botanical relations of which I have not been able to determine. In all instances they have brought me the same wood as the cause of their condition. They call it "redwood." It may well be this cocus wood.

And here reference may be made to the very frequent occurrence of dermatitis of the hands, often of severe type, among furniture-polishers. It is impossible to determine the nature of the exciting agents, so complex is the composition of the polishing and staining fluids used by them.

GUIACUM: LIGNUM VITÆ.

I have met with one case of severe dermatitis produced by applying a mixture of tincture of guiacum and vinegar to the leg. The latter alone could scarcely have excited so much inflammation.

HUMULUS.

The hop belongs to a dangerous family, the *Urticaceæ*. I have not met with a case of disturbance of the skin produced by it, but I have an anonymous reference to one where erythema and swelling of the face and neck were produced by exposure to the vapors of a hop fomentation, and Piffard[8] ascribes to it the power of exciting an erythematous eruption with scattered pustules. Several large brewers inform me that they have never observed any form of irritation produced by hops in their workmen.

HERACLEUM GIGANTEUM. ANGELICA ARCHANGELICA.

I find a record of dermatitis produced by these umbelliferous plants in the Transactions of the Dermatological Society of Great Britain and Ireland.[9] In my book I mention the irritative properties of *Heracleum lanatum*, the only native representative of this extensive

[8] Piffard. *Materia Medica and Therapeutics of the Skin.*
[9] *British Journal of Dermatology*, Vol. IX, pp. 285, 287.

genus. Dr. Stowers reports the case of a gardener, whose arms and hands were inflamed by the young shoots of the cow parsnip, *H. giganteum* or *villosum*, much cultivated on account of its great size, ten or twelve feet high.

At the same meeting Dr. Walsh showed a confectioner, whose arms and hands became "red, rough and blistered" the next day after gathering *angelica* for preserving as a sweetmeat. A friend, who assisted him, was affected in the same way. You are all familiar with this European plant as a confection, so named for its supposed medicinal virtues. We have sixteen species in North America, but I have no knowledge of their possessing irritative properties.

HYACINTH.

Notice was called to the irritation caused by handling hyacinth bulbs by Mr. Freeman, of London, in 1896. Later, Professor Henslow, at a meeting of the Royal Horticultural Society, and Dr. Morris, before the Linnæan Society, brought forward additional evidence. They both attributed this action upon the hands of gardeners to the abundant presence of minute needle-shaped crystals of oxalate of lime adhering to the scales of the bulbs. The dermatitis occurs upon the hands and arms; also upon the face by immediate contact with the hands, no doubt. Associated with these *raphides* great numbers of mites are found between the scales, *Rhizoglyphus echinopus*, which Mr. Freeman[10] regards as the cause of the inflammation. Both the common and the Roman hyacinths are capable of producing this irritation, but upon some persons only. I find but few bulb florists susceptible, on inquiry.

COTONEASTER MICROPHYLLA.

H. D. Cooper (London *Lancet*, June 7, 1902) describes an acute dermatitis, which was produced on the hands, arms and face of three gardeners who had been engaged in cutting and binding this climbing plant. The eruption consisted of papules and oozing areas. It belongs to the Rosaceæ, and is highly ornamental. The leaves are pubescent and the poisonous principle may lie in the hairs.

HUMEA ELEGANS. COMPOSITÆ.

A handsome bush, often cultivated in hot-houses. Dr. Hearnden describes[11] the case of a lady who presented an eczematous dermatitis of the face caused by rubbing the fragrant blossoms upon her veil. Rubbing them upon his own arm, a fine papular efflorescence was excited of brief duration.

[10] *British Journ. of Derm.*, Vol. IX, p. 66.
[11] *London Lancet*, July 26, 1902.

THE GINKGO TREE, SALISBURIA ADIANTIFOLIA.

Late in November, 1901, I received from the botanist of the "Poisonous Plant Investigations Department," U. S. Department of Agriculture, a communication concerning a severe case of dermatitis from the fruit of the ginkgo tree. The main facts are given as stated by Mr. Chestnut:

"Ginkgo fruit was collected to the extent of about a third of a bushel by one of the scientists of our department, and these were allowed to stand in a basket outside the window for four days. On the evening of the fourth day Mrs. M., the man's wife, washed them with tepid water in a basin, the operation lasting about an hour. The fruit is naturally ill-smelling, but this lot seemed particularly so. Mrs. M. had previously pulped small quantities of the fruit for the nuts, which she roasted and gave to the children to eat. Even while washing in this instance she noticed a slight itching of the arms, which were laid bare up to the elbow. The patient was awakened shortly after midnight with intense itching, and the arm soon began to swell. A day or so later the face also began to itch and swell, until finally she was unable to see. At about this point the case was called to my attention. I found no mention of dermatitis from ginkgo described in your book or any of the literature. I suggested the use of an alcoholic solution of lead acetate, which gave great relief. Thinking, however, that you might know of a specific antidote, I wired to you. When your message was received the patient's arms were still slightly swollen. Your remedy was applied at once and I now have the satisfaction of telling you that it was attended with very satisfactory results. I have not heard from the case for a couple of days, but it was progressing very well on Saturday. There can be no doubt that this was a genuine case of poisoning from ginkgo fruit, for there was no poison ivy growing around the house, nor had any member of the household been out in the woods in contact with it. The stove-wood was entirely free from any pieces of poison oak.

"I was glad to learn that the ginkgo tree is beginning to fruit this year for the first time in the botanical garden at Cambridge. Our trees at the Department have not been fruiting well except for the last four or five years.

"I have spent some time in looking up the literature relative to the analysis of the bulb, and have found but few references. Schwartzenback describes a peculiar acid which he called ginkgoic acid, on page 424 of Volume VI., *Viertelz. prakt. Pharm.*, and Chevreul and Cloez have determined the butyric acid. I have not been able to obtain this

reference. Wittstein, in his *Handwörterbuch der Pharmakognosie des Pflanzenreichs*, states, on page 268, that the flesh also contains gum, sugar, tannin, citronic acid, pectin and chlorophyll. He also suggests that the ginkgoic acid may be an impure acetic acid. It would be very interesting to determine the active constituent, but I do not feel that I have time to make the investigation at present. The desirability for doing so is, however, emphasized by another case of poisoning which happened about two weeks ago at this Department. The eruption in this second case was precisely similar to that of the first, so that now the question of uncommon idiosyncrasy has been effaced."

This tree is an interesting member of the *Coniferæ*, with striking deciduous, palmate or fan-shaped leaves. It is a native of Northern China. Although there are several examples of considerable age and size in and around Boston, I have never seen it in fruit, nor was I aware of the properties established by the observations above recorded.

C—SUSPECTED PLANTS.

TECOMA RADICANS, TRUMPET VINE.

Many harmless vines or creepers are looked upon with suspicion on the supposition that they may possess poisonous qualities, or may be the poison ivy, *Rhus toxicodendron*. Among them are *Tecoma* and species of *Ampelopsis*.

A few years ago several articles appeared in botanical journals with regard to the alleged poisonous properties of the trumpet-creepers, a very common vine in the Southern and Southwestern States. Mr. Murdoch, U. S. Dept. of Agriculture, and other botanists of the South, were of the opinion that the vine is perfectly innocent. Although I am aware that a similar prejudice against it exists in the New England States also, where it is extensively cultivated about houses, I have never been able to obtain reliable evidence of its possessing any irritative properties.

AMPELOPSIS.

In the Amer. Journal of Cutaneous Diseases, April, 1895, our esteemed colleague, Dr. Grindon, of St. Louis, published a communication under the title, "May *Ampelopsis quinquefolia* Give Rise to a Dermatitis?" A young lady, it is stated, "broke out abundantly on hands and face with water-blisters similar to those caused by *Rhus toxicodendron*." She had been handling the stems of the Virginia creeper, and the condition of the skin was attributed to this. The evi-

dence is not absolute here, because it is admitted that poison ivy grew within a half-mile of the house.

It is, of course, possible that any plant may be innocuous to the million and yet poisonous to an individual, but evidence must be absolute, both positive and negative, before accepting it as convincing.

I may relate in this connection a case in point: A young lady from the country, accompanied by her mother, consulted me on account of a severe acute dermatitis of the hands and face, closely resembling *Rhus* poisoning. On inquiry she stated that she had not been out of the home yard for a week previously to the appearance of the eruption, and that the only vine in the yard was a wood vine (*Ampelopsis quinquefolia*) growing over the front porch. I asked her to bring me a specimen of it. They came again in a few days with some of its foliage. It was *Rhus toxicodendron*. On so informing them, the mother exclaimed: "There, that man did it." It seems a boarder, who had paid suit in vain to the daughter, asked permission on leaving to set out a vine as a remembrance of happy hours spent in the front porch. He selected *R. toxicodendron*, perhaps to symbolize the burning nature of his passion.

You all know how often these creepers are mistaken for each other, especially in autumn, when their foliage takes on the most brilliant colors of all vines. If one would only remember that three leaflets mean possible danger, and that five mean safety, such cases would not occur. For myself, I still regard *A. quinquefolia* innocent.

OTHER FORMS OF AMPELOPSIS.

In the London *Lancet*,[12] under the title "Eczema Caused by Virginia Creeper," Drs. Burd and Palm report cases of acute dermatitis developing after handling the leaves of a vine called *Ampelopsis Hoggii*. I need not say that this plant is not the Virginia creeper. It is a large-headed variety of *A. Veitchii*, not commonly cultivated with us, where the so-called "Boston vine," *A. Veitchii*, grows so luxuriantly. I have known no instance of poisoning by it. This is, as you know, a Japanese plant, and in this connection I quote from the letter of a botanist[13] traveling in England. It may afford a solution of the English cases above referred to:

"Another very different species of *Rhus* is passing as *Ampelopsis japonica*, but its trifoliate leaves, rooting stems and milky juice at

[12] *London Lancet*, Jan. 3 and 17, 1891.

[13] Jack in *Garden and Forest*.

once indicate that it is a *Rhus* very closely allied to, if not identical with, our poison ivy (*R. toxicodendron*). This so-named *A. japonica* has been distributed as a novelty by a well-known English firm, and in Germany I found it planted as something choice to form a covering for the supports and sides of a much-used arbor."—*Country Life.*

I may cite in this connection another case in my own experience: I was asked one autumn by a physician to see a boy with a severe dermatitis. I gave the diagnosis—*Rhus* poisoning. The reply was that the boy had not been out of the city for two weeks. On inquiry it was admitted that he had been playing in a churchyard where the Boston vine grew, and had picked some of the brilliant leaves. I visited the spot and found a vine of *Rhus toxicodendron* growing amidst those of *Ampelopsis Veitchii;* and its foliage outshone those of the latter in beauty.

These instances explain, I think, how innocent plants may get a bad reputation.

While preparing this paper, I thought to write to Dr. Chesnut, of the Poisonous Plant Investigations Bureau, to inquire what plants not included in my published lists he might have knowledge of, and he kindly sends the following reply:

"It is, of course, extremely difficult to get up a complete list of plants which have been known to cause dermatitis, but I think that I can add a few to your published list and to those enumerated in your letter. You may possibly have referred to some of these in your book, but I could not find them indexed under their scientific names.

"The common radish sometimes causes very painful swelling of the hands and arms when they are picked in considerable quantity in the morning before the dew has been dissipated. The common dogwood, *Cornus florida,* is accused, especially in New England, of causing a dermatitis when the flowers are gathered. This is likewise true of *Kalmia angustifolia,* and there is one case of skin poisoning which was traced to *Monotropa uniflora.* The commercial pawpaw, *Carica papaya,* causes severe dermatitis on the hands of persons who handle the green fruit in making pickles of it. I have one case of poisoning against one of the California century plants. A correspondent writes that in beating the leaves to get at the fiber his whole arm, which was exposed to the juice, was badly poisoned. A common Western weed known as dog-fennel, *Anthemis cotula,* very frequently causes a slight dermatitis in the case of children who strike one another with the green plant. Flowers of the common field daisy, *Chrysanthemum leucanthemum,* are sometimes poisonous to children. A few cases of

poisoning from handling the star cucumber, *Sicyos angulatus*, have been reported.

"Besides these plants, there are a few which cause a dermatitis, although, perhaps, indirectly, the real cause being possibly the fungi which grow upon them. I refer especially to several species of *Hypericum*, and to the buckwheat *Fagopyrum fagopyrum*. The chronic diseases caused by these plants are essentially cases of skin poisoning. Closely allied with these are the various *molds* which directly cause dermatitis. An interesting paper on this subject was published by Dr. A. W. Brayton, in the *Indiana Medical Journal*, Vol. XVIII., pp. 403—413, 1900."

"My experience with the species of *Laportea*[14] is as follows: On March 20th a gardener at the Washington Botanical Gardens pointed out two of the young plants, some four or five inches high, which were being cultivated under glass. He informed me that before he knew what it was he touched the plant, and was so badly poisoned by it that he could hardly sleep for over a week. Having heard of the very marked effect of the *Laporteas*, I touched the stem of one of the leaves with my thumb, using but very little pressure. The effect was immediate and very severe. It was almost indescribable, but the tip of the thumb felt very much as though it had been touched with a red-hot iron. The pain extended clear up to the arm within a very few minutes, and was sufficiently painful to almost make me shudder. The pain was very severe from 2 p. m. until 11 p. m., and was felt less severely the next morning. After that the pain rapidly ceased, but was acute for at least a week whenever the thumb was wet or even moistened with water, and afterward until the first of May sharp pains would occur in the thumb whenever it was pressed heavily against an object on the point of contact with the plant. In spite of this effect there was absolutely no mark on the thumb showing where the glandular hairs had entered it.

"The plant was not in flower when I last saw it. I have not looked thoroughly through the literature for the effects of *Laportea*, but I find that several species are mentioned as being extremely poisonous to the touch. Very fortunately, however, the genus is pretty closely confined to the tropics."

[14] Mr. Chesnut has just identified this plant as *Laportea peltata*, Gandich, of the Malayan peninsula.—J. C. W.

DISCUSSION.

Dr. P. A. Morrow was sorry that Dr. White had not taken the time to give the full history of his case of poisoning from the use of paraphenylene diamin. He had seen two such cases, produced from the use of the French preparation known as "la Royale" hair dye and the dermatitis it gave rise to was very obstinate and showed a great tendency to invade surfaces which had apparently not been touched by the preparation itself. It had what we might term "invading tendencies" which were very characteristic. He knew of no other artificial eruption that was more intense and persistent, or more difficult to cure.

It was no easy matter to discuss other parts of Dr. White's paper, with the unpronounceable names it contained. The only thing he wished to say was that a great many innocent plants received a bad reputation for toxic effects simply from clinical misinterpretation. Dr. White might remember that some three or four years ago the speaker had sent him a shrub or plant which was thought to have been responsible for the occurrence of a very intense dermatitis in a member of his family. No poison-ivy could be found in the vicinity where the shrub had been gathered and, although he knew that the person affected was very susceptible to ivy poisoning, he thought that element had been absolutely eliminated. A subsequent examination revealed the fact that some ivy grew in the clefts of the bark of an adjacent tree. If he had not taken the precaution of sending this shrub to Dr. White he would have concluded that he had discovered in this entirely harmless plant the cause of an intense dermatitis.

Mr. V. K. Chesnut, of the U. S. Department of Agriculture (by invitation.): It was his duty, in connection with work in the U. S. Department of Agriculture, to investigate all cases of poisoning from plants that might be called to his attention. In this way the Department obtained accounts of a great many cases. The most common causes of skin poisoning from plants were the poison ivy and the sumac; these, as we knew, were very widely distributed in this country, the latter even being cultivated for ornamental purposes. In the case of most of the plants mentioned by Dr. White, the evidence of their toxic properties was very good indeed. The fact that radishes poisoned some people would not be generally accepted, but he had sufficient evidence now to confirm his opinion that persons who handle a quantity of radish leaves are apt to be poisoned by them.

The evidence that the fruit of the ginkgo tree is poisonous was to him conclusive. He saw two instances of this, one in 1901, and another the following year. In both cases, a large quantity of the fruit was handled. Poison ivy would undoubtedly prove poisonous to a great many persons who might claim to be immune from its effects, provided a considerable quantity of the toxic oil or the juice was applied to the person's skin. This was also true with many other plants.

Dr. Pardee wished to add the name of the "Early Everlasting," as

it was commonly known, to the list of flowers that might possibly be the source of a dermatitis. It was a small white flower, found in the spring of the year. He had seen it produce a mild dermatitis of the face, lasting perhaps twenty-four hours.

Dr. Morrow had often observed that poison ivy was peculiarly prone to affect blondes rather than brunettes. He had known brunettes who could handle the vine with impunity, while blondes, as a rule, were severely affected from the slightest exposure—even from proximity to the plant without actual contact.

Dr. Stelwagon said that he had observed at least half a dozen instances of a dermatitis of the hands and sometimes of the face, produced by the use of *Metol*. This drug metol was used by photographers in the development of negatives.

Dr. Shepherd wished to speak of a case of *rhus* poisoning seen last autumn. The patient was a physician's daughter, who suffered from a very severe attack of rhus poisoning. She recovered from this, and the following spring had a recurrence. Investigation showed that the dress which she had worn at the time of the first attack had been put away and not worn again until the following spring, and the wearing of this dress was followed by a recurrence of the dermatitis.

Dr. George T. Jackson had observed that the application of epicarin might set up a dermatitis like that produced by sulphur. In one instance where it was prescribed in ten per cent. strength for a blonde patient, it produced a very intense dermatitis. He was led to use it because it was represented as not irritating.

Dr. Charles J. White observed a patient in the Massachusetts General Hospital who painted himself with epicarin and set up an eruption resembling that produced by chrysarobin. He had in mind another patient, a woman, whose skin was so delicate that any plant or sticky pollen would poison her. In her case, the list of toxic plants would be a very long one.

Dr. Gilchrist had seen very many cases of dermatitis from poison oak and ivy, but he had never seen the palms of the hands involved. Sections from cases of rhus poisoning showed the vesicle very superficially situated.

Among the toxic chemical substances, boracic acid might be included. In that connection he recalled the case of a woman who suffered from an eczematous eruption on the face and neck. After diligent inquiry he learned that she was in the habit of keeping her bowels open by using an injection composed of a dram of boracic acid to a quart of water. Upon stopping these injections the eruption disappeared. In the course of a month she returned with a similar eruption, which had appeared after a single rectal injection of a quart of water containing a dram of boracic acid. The eruption again disappeared, but it recurred after the use of the same injection. It was apparently distinctly associated with the absorption of the boracic acid.

Dr. H. G. Klotz wished to confirm what Dr. Gilchrist had said about the use of boracic acid. He formerly used it quite freely in bladder troubles, and upon several occasions its use was followed, in the course of a week or so, by an eczematous eruption on the forearms and on different parts of the body. He had no doubt that it was due to the boracic acid and it was on that account that he gave up using it in those cases.

Dr. Stelwagon: The cases just referred to by a number of the speakers were not examples of dermatitis venenata, but of dermatitis medicamentosa; in the latter the disturbance was due to drug absorption or ingestion, and not to the local external irritant action which characterized dermatitis venenata.

Dr. James C. White wished to ask whether anyone present had ever seen an example of ivy poisoning in a Negro? He thought there was no doubt that blondes were more susceptible to the action of poison ivy than brunettes.

In connection with Dr. Gilchrist's remarks he would say that a rhus dermatitis might occur on the palms. He had had it affect his own palms, although the lesions were not as prominent there as in other regions.

He was not willing to accept Dr. Shepherd's explanation of the recurrent dermatitis in the case he reported. While it was a popular belief that ivy poisoning might recur spontaneously a year after the primary attack, he did not regard that theory as at all plausible; there were no grounds for it. On the other hand the skin of a person who has once been poisoned by ivy was no doubt more susceptible, and with the onset of the warm weather, eczematous lesions or other forms of dermatitis might occur. The idea that the poison of rhus should stay in the system for a year and then manifest itself was absurd.

Dr. L. Duncan Bulkley: Regarding the case of recurrent ivy poisoning mentioned by Dr. Shepherd, said that he had seen a similar occurrence. The case was one of general dermatitis from poison ivy, and several months later, when the man again put on the shirt which he had worn at the time of the primary attack, the eruption recurred. He thought there was no doubt that the poison of the ivy might be retained in the clothing. He had seen this dermatitis occur in the winter, the source of the infection having been the dried ivy vine contained in Christmas greens.

Dr. James C. White (closing the discussion) did not think Dr. Bulkley had proven the fact that the poison of ivy may be retained for any length of time in the clothing. Such cases required very careful investigation. It was well known that the poison of the ivy vine was quite evanescent. Herbarium specimens of R. Toxicodendron and venenata do not produce dermatitis. In many instances he had tried to inoculate persons who were known to be extremely susceptible to the poison directly from the lesions of another person, and had never been able to produce the slightest dermatitis in that way.

A CASE OF SYMMETRICAL GANGRENE.

By Edward Bennet Bronson, M.D.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

I FIRST saw Miss —— in the winter of 1899. She was then seventeen years of age, and a student at an out-of-town college; a tall, well-formed, well-nourished girl, presenting every appearance of health, with the exception of the ailment about to be described. In temperament she was rather of the nervous type, of high spirits and normal enthusiasms, ambitious in her studies, and, at the same time, with a decided taste for robust sports and outdoor exercises. Mentally and emotionally she seemed perfectly normal and sane, without a trace of anything that would suggest a tendency to hysteria. She had had few and no serious illnesses in her life, and at the time referred to, except for the affection of the legs, she seemed perfectly well. She came of an intellectual family with some neurotic and some gouty tendencies, but generally strong and healthy.

The affection referred to had begun in the summer of 1894, when she was in her fourteenth year. The thing that first attracted attention was pain in certain places on the legs and ankles. Whether in this first attack all of the affected places were the same as those that were affected later, and whether then the disease was symmetrical or not, the patient does not remember, but is sure that in all its subsequent attacks the sites were always the same and always symmetrical. The pain at first was confined to areas not larger than a dime. It was of a burning, sometimes lancinating character, usually worse at night. It did not seem to be aggravated by exercise nor when the legs were in a dependent position. Indeed, exercise seemed, by the diversion it afforded, to give relief to the pain. The same has been true of subsequent attacks. There was considerable redness and some swelling of the affected places, and the parts were hot to the touch. At no time has there been any evidence of local syncope, no algor and no ischæmia. The redness was of a dusky hue, especially toward the center of the patch, becoming gradually darker or violaceous, and finally there was an exfoliation of the epidermis without vesication, leaving a tender, painful, eroded surface that was slow in healing. The whole process took about six weeks. During the first three years the symptoms were repeated once or twice every summer, but did not occur in the winter. Subsequently the attacks have occurred in the winters also, have been of longer duration and more severe.

When I first saw the patient in December, 1899, the parts chiefly affected were the anterior surfaces of the legs at about the junction of the middle and lower thirds. On either leg there was an area of oval shape, elongated from above downward, an inch or an inch and a half in length, of a dusky, red hue, with two or three shallow, red erosions in the middle that resembled the surface left after rupture of a blister. There were also some superficial scars within the described areas. It was stated that on several occasions the lesions had been cauterized with silver nitrate, and once or twice the curette had been used. The eroded surfaces were very sensitive to the touch, and the clothes rubbing against them caused much discomfort and seemed to aggravate the pain. There were similar patches behind the outer malleoli of both ankles, but less extensive and less painful than those on the shins.

The patient was under my observation at this period but a short time. At the end of the Christmas holidays she returned to school, and it was not until September of 1902 that I saw her again. Meanwhile, the disease had continued much as before, but with one long interval of eighteen months' exemption. In September she was suffering severely. The trouble had been continuous for five months or more. The sites affected remained precisely the same as three years before, except that the areas had doubled in size and the ankles were affected both on the inner and outer sides. On the shins the patches were about three inches long and two inches wide. The surfaces here were of a dark, red color, appearing somewhat cyanosed toward the center, where there were superficial, rounded ulcers of an indolent type, varying in size from one-fourth to three-fourths of an inch in diameter. The surrounding erythema was of an inactive type, and was dotted with little congeries of dilated arterioles or veins. Scars were also apparent. On both outer and inner sides of the ankles behind the malleoli were similar dusky-red patches with very small ulcers of irregular shape, the changes being more pronounced in the outside patches than in the inner. The pulsation of the posterior tibial arteries could be distinctly felt, and was apparently normal. There was considerable hyperidrosis of the feet, but not very excessive. The tendon reflexes at the knees were exaggerated. The sense of touch in the region of the lesions was not much affected—if anything slightly diminished. The pain was of the same character as before, sometimes burning, sometimes an aching sensation, varied by sharp, paroxysmal twinges. There was also much itching, especially about the shin lesions, mostly at night. Notwithstanding the long continuance of her

suffering, her general health remained good. She was thinner than three years before, but with no appearance of emaciation nor cachexia, and she appeared in manner as sunny and bright as ever, with little disposition to complain.

It was stated that for some time she was under the care of a well-known neurologist, who, assuming the disease to be due to local vascular changes of gouty origin, had, in the way of treatment, principally advised measures of regimen, with more or less resulting benefit. In May last he had referred her to a surgeon skilled in radiotherapy, who had made six exposures to the X-rays. Each exposure was for five minutes and, as the patient thinks, at the distance of from six to eight inches. The sittings were on every other day at first, later at longer intervals. This gave no relief. In fact, it was the patient's impression that the effect was rather to aggravate both the pain and the inflammation. Since then the trouble had been continuous and severe up to the time I saw her on the 27th day of September. From this time there was a gradual increase in the severity of the symptoms. The increase was not altogether uniform; there were days when inflammation and pain seemed to abate, to recur more severely later on, till on October 12 there began a decided gangrenous process that was accompanied with more pain than ever before, and that reached its culmination in about eight days with the formation of deep sloughs, when the pain suddenly subsided not to recur again.

The gangrene began in a narrow border just at the edges of the ulcers, of those both on the shins and on the ankles. It gradually spread in the next few days so as to embrace the ulcerated surfaces entirely, and also encroached upon the surrounding unbroken skin, and at the end of a week the tissues on the shins over areas four inches long by two inches wide had become completely black and necrosed. On the ankles the process was less extensive, but of the same character. In all the places it was accompanied with areolar redness and swelling, together with intense pain. Toward night there was a slight febrile movement. The sloughs that formed were hard, dry and perfectly black. The left leg seemed slightly the worse. On the 20th of October the pain ceased, the inflammation subsided, and, in a day or two after, lines of demarkation had formed. At about the same time a papular erythema, apparently beginning on the legs, soon overspread the entire body, but mostly over the thighs, arms and back. There had been much itching and redness about the lesions from the time the gangrenous process began—indeed, for some time before that. The general eruption was made up of discrete, disseminated or grouped,

elevated papules, small in size and accompanied with intolerable itching and a slight rise in temperature (100° at night). It lasted but three or four days. Following this there ensued a long period of inactivity, so far as the leg lesions were concerned, the necrosed portions showing very little disposition to separate. They would loosen a little at the edges and occasionally bits could be snipped off, but the great mass of black slough on the legs remained firmly and deeply embedded in the tissues. On the surface it was black and dry, below gray, sodden and fibrous. On the ankles the necrosis had not extended so deeply, and the gangrenous parts separated spontaneously in a week or two. In the latter part of November the patient entered the New York Hospital, service of Dr. Stimson, and the sloughs were removed by excision. First one leg was operated on, and then, the result proving good, the other a week or so later. In operating it was found necessary to cut almost to the bone before sound and vascular tissue was reached. Both wounds were grafted by Tiersch's method; they healed rapidly, and there has been no return of any trouble since—that is, for nearly six months.

Taken altogether the case is an unusual one. Its nosology is not easily defined. Clinically it was chiefly characterized by recurrent attacks of pain and inflammation, occupying circumscribed areas that were always in the same positions and exactly symmetrical, together with the development of a necrotic process that, in the earlier attacks, was apparently confined to the epidermis, later involved the whole skin, and, last of all, not only destroyed the skin but subjacent structures as well, almost down to the bone. With that last attack the disease seemed to have exhausted itself.

The first query that occurs to one is: Was it the Symmetrical Gangrene of Raynaud? So far as the designation given by Raynaud to his disease, viz., *Asphyxia localis cum Gangræna Symmetrica*, is concerned, it applies very well to the case under consideration. But in several points the symptomatology differs decidedly. Not only were the *akra*, properly so called, that is, the tips, tips of the toes, fingers, nose, ears, which are the more usual sites in Raynaud's disease, unaffected, but the so-called local syncope—the coldness and pallor of the parts, that is a more or less essential feature in the latter disease—was entirely lacking. In place of algor and ischæmia there were from the start decided redness, and both subjective and objective sense of heat. This feature, together with the amount of pain, disproportionate to the degree of trophic change, which latter, in the earlier attacks, was insignificant, suggested the possibility of one of those

transitional forms intermediate between Raynaud's disease and erythromelalgia. The condition of the tendon reflexes (which in the former are diminished, in the latter increased,) would favor such a surmise. One important symptom of erythromelalgia was lacking, namely, the disposition for the pain to increase when the affected part is lowered and to diminish when it is raised. The pain was often at its severest when the patient was in bed at night. Moreover, though trophic changes and even gangrene may occur in this disease also, we should hardly expect such deep-seated necrosis as occurred in the last attack.

To assume that the trophic changes were due to arterial sclerosis or endarteritis obliterans, though it might afford another link in the succession of pathological events, it would in nowise help us to a definite solution of the essential and primary disease, nor explain the peculiar localization. There were no signs of disease in the vascular system elsewhere. To call it an angio-trophic neurosis would still leave much to be explained.

Hysteria or auto-suggestion sometimes give rise to peculiar gangrenous lesions, but there was little in the present case to suggest such an etiology. The patient was not hysterical, and the course and type of the affection seemed to indicate a more definite and regular form of disease. Still less was there reason to suspect an artefact origin. Aside from other circumstances that make such a suspicion extremely improbable, the fact that the effects were clearly produced from within, the superficies being affected secondarily, the absence of angular outline and the peculiar symmetry are all against it.

Finally, the question may be raised as to whether the treatment employed had anything to do with the severity in the course of the lesions in the last attack. Could the X-ray exposures in June have had anything to do with it? It is true that the gangrene bore a close resemblance to that produced by excessive Röntgen irradiation, and also that, following the June treatment, the affection gradually grew worse. But according to the patient's account the exposures were not excessive, nor was there likely to be any imprudence in their management in view of the experience and conservative character of the well-known surgeon who managed them. Nor does it seem conceivable that a gangrenous reaction from X-rays could be delayed in its appearance for four months. Whether such a case afforded indications for X-ray treatment is another matter. Presumably it was used for its anodyne effect often observed in treating cancer.

When the patient returned to me in September, the arsenite of

potash was prescribed internally, together with local applications of menthol and resorcin—the menthol to relieve the itching and burning sensation and the resorcin for the hyperæmia. As the pain gradually grew worse, various nervines and anodynes were given, including potassium bromide, cannabis indica, atropia sulphate and aconitine ("potent" of Merck), and locally cocaine and orthoform. For the increasing inflammation, besides emollient ointments, lotions were used of aluminum acetate, of picric acid (a saturated watery solution) and also warm dressings. The only remedy about which I have misgivings is the orthoform. Though it gave more relief than any local remedy used, and is employed extensively in similar painful affections, it has recently acquired the bad reputation of occasionally causing not only dermatitis but sometimes gangrene. Though such cases must be rare, and probably imply an idiosyncrasy on the part of the individuals affected, nevertheless, in another case where already a tendency to gangrene existed I should use it more cautiously. In all, about a drachm, or possibly a drachm and a half, was used in the course of a week or ten days. The dry powder was applied to the ulcerated surfaces and usually over it an emollient ointment.

The papular erythema that broke out at about the time that the active process and the pain came to an end appeared like a toxicoexanthem. No drug had been given that could account for it, unless it were the pills of aconitine and atropia given during the three or four days previous for the relief of pain. Each pill contained 1 400th of a grain of Merck's aconitine ("potent") and 1 200th of a grain of atropia sulphate. Towards the end three pills were taken a day, usually towards night, with intervals of an hour or two between. It might possibly have been the orthoform, but the orthoform had been stopped a week before, and only charcoal poultices had been used afterwards. It is more probable that the eruption was a septic effect, which might be accounted for by supposing the resorption of purulent septic matter imprisoned beneath the sloughs before separation had begun at the edges.

Postscript. (Sept. 17th, 1903. Since the above was written the disease has recurred. About the 1st of July a small purplish spot appeared behind the right outer malleolus that was exceedingly painful and remained six weeks, when it disappeared without gangrene or erosion of the skin. At present no trace of it is left. Three weeks ago a similar spot appeared on the left shin exactly in the middle of the area occupied by the slough that was excised in November. At present this purplish spot is about three-quarter inch in diameter showing in the center a tiny

black spot of gangrene (one-eighth inch in diameter.) The pain is severe and of the same character as attended the former lesions. There is also behind the left outer malleolus a small, inflamed, dusky red spot that has lasted about two weeks but has not been painful.)—E. B. B.

DISCUSSION.

Dr. A. Van Harlingen said that his attention had been very particularly drawn to eruptions of this type in connection with hysteria, but in none of his cases was the condition exactly similar to that described by Dr. Bronson. He was inclined to think that Dr. Bronson's case was of a different character, and he agreed with him that it was not connected with the hysterical condition.

Dr. Pollitzer: It seemed to him that we might have to include Dr. Bronson's case in the sub-variety of Raynaud's disease described by Weiss, in which cyanosis was a prominent symptom. This cyanosis was, in consequence of a contraction of the arterioles, unaccompanied by the simultaneous contraction of the veins, as was the case in typical Raynaud's disease. The formation of hyaline thrombi in the arteries, as described by von Recklinghausen, might easily account for the final gangrene.

Dr. L. A. Duhring said that as he listened to the report of this case it seemed to be a fairly typical example of what was generally known as erythema gangrænosum. He had seen a few such cases, and the description given accorded closely to the condition known under that term. In that case it was not usually associated with the several diseases to which the reader had called attention. In one severe case of erythema gangrænosum which he had for a long period under observation, some years ago, the gangrenous process destroyed large areas of tissue and extended deep into the integument and the subsequent scarring and deformity was very extensive. In that instance the lesions had been repeatedly excised without affording any relief.

Dr. Bronson (closing the discussion) said that it seemed to him that the cases of erythema gangrænosum described by Dr. Duhring would fit in very well with what Cassirer had termed multiple neurotic gangrene of the skin. There were many varieties of these affections, especially those of neuropathic origin and it was not always easy to classify them. The different types had many symptoms in common and the most typical were often subject to great variations. Even in Raynaud's disease there was hardly a symptom that in an exceptional case might not be lacking. In some respects, the case presented, especially in its symmetry, strangely suggested Raynaud's disease; in other respects it appeared unique.

DESCRIPTION OF PLATE.

From a water-color drawing showing the severe gangrenous process that began on October 12th, as it appeared on the fourth day.

PLATE XLIII.—To Illustrate Dr. E. B. Bronson's Article.



THE PRESENCE OF PECULIAR CALCIFIED BODIES IN LUPUS-LIKE TISSUE.

T. Caspar Gilchrist and W. Royal Stokes, Baltimore.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE patient, who is a negro girl, came to the Johns Hopkins Hospital Dispensary in 1894, when she was 16 years old, and gave the following history:

Family History: Her mother was still living and well and was 51 years old; her father died when he was 50, of malarial fever (so the doctor said). He was ill one week, but had no diarrhœa. The mother was seen by us and she appeared to be healthy, although then she had had eleven children, the eldest of whom was dead. There were no miscarriages. All the living children (ten) were healthy except one, who had always been a weakling. He is now 33 (1894). The patient was the youngest of the family.

History of the Present Condition: Patient had rather prominent eyeballs. She suffered from weak and watery eyes three years previously when she was at school, and was treated for this at a dispensary. Lachrymal probes were used. Soon after this skin lesions began at the inner canthus of each eye. There was no other eruption on the skin. The lesions gradually increased in size downwards and outwards. Two years later a similar eruption made its appearance at the junction of the right ala of the nose and cheek, and it also gradually increased in size.

Patient has suffered from marked hoarseness for the previous five years, and also had sore throat for two years. The latter trouble got well some time ago. She has had for the last four years, and has now, enlarged glands below the angle of the jaw.

Present Condition (1895): On examining the throat the uvula was found to have been practically destroyed, there being only a very slight stump present. There was also a decided scar on the right tonsil and a number of very evident scars on the pharynx. Another scar was seen on the left side of the larynx. The cutaneous lesions near the eyes begin at the inner canthus of each eye and extend downward along the curve between the nose and the cheek for about one inch. They both form dull red, raised, irregularly longitudinal-shaped patches, which are covered in places by dirty scabs. On removing the scabs numbers of small, superficial, large pin-head, to small split-pea sized, punched-out ulcers were exposed.

The whole end of the nose was implicated, *i.e.*, the tip and margins of the alæ; the lesion formed a continuous patch which extended upwards from the margin one-half inch. On removing the dirty black scab which covered the patch there was exposed an irregular, papillomatous, somewhat fungating mass which bled easily and profusely. The disease did not involve the mucous membrane. There were a few small, yellowish pustules dotted over the surface.

On the upper lip there were two smaller patches similar to those situated near the eyes. One was about the size of a large pin-head, and was situated just below the septum of the nose. The other was just below the left nostril and was about the size of a dime, being dull red, raised and slightly scaly. No lupus nodules could be detected near the margin of any of the patches. There was no other eruption on any part of the body. No symptoms of syphilis were present. The submaxillary glands were markedly enlarged.

Sections were taken from the lesion on the nose and also from the lesion near the left eye. Broadly speaking, the sections showed a marked tubercular appearance, but scattered here and there in the sections, and especially in the giant-cells, were found curious bodies, which were taken at first for blastomycetes. Many were round, oval and doubly contoured; but very many assumed curious shapes and were quite large, especially those enclosed in giant cells. Many appeared to have undergone a calcareous degeneration, and so were thought to be like a blastomycete described by Sanfelice as *Blastomyces lithogenes*, which he found in an animal. The calcareous degeneration was demonstrated by adding hydrochloric acid to a section and noting the formation of bubbles of gas (carbonic acid gas) under the microscope. Many sections were stained for tubercle bacilli, but none were found.

The patient had been given potassium iodid and mercury bichlorid, and the lesion had improved under the treatment. She then disappeared. When she returned some months later the cutaneous lesions under the eyes were practically well, having been curetted and burnt with "acid." The lesions on the nose had relapsed and the submaxillary glands were larger. The submaxillary glands were now removed and a section of one of the glands showed again a markedly tubercular appearance, but scattered through the gland were numerous large, calcareous-looking bodies and a few bodies like those seen in the cutaneous lesions. The larger bodies were all enclosed in giant cells.

Numerous sections from one gland were stained for tubercle bacilli, but none was found. A portion of the gland was teased and

introduced into the peritoneal cavity of a guinea-pig, which died a month later. There were found numerous large pin-head-sized, firm nodules in the liver; and these nodules were made up mostly of bodies similar to those found in the cutaneous and glandular lesions. Many necrotic foci were also seen in sections from the liver, and bodies were present in the majority of these foci.

The guinea-pig did not die of tuberculosis, nor were any tubercular lesions present in any of the organs.

The patient again disappeared after the operation and reappeared two years later with a relapse of the cutaneous lesions on the tip of the nose (although the lesions had been excised by the surgeon who removed the glands), and more enlarged glands in the neck. A second more radical operation we advised and carried out January, 1897. Dr. Welch, who took a deep interest in the case, attended the operation and made the cultures and did a number of inoculation experiments with animals. All kinds of media were used, but with negative results. A dog was inoculated intravenously with 1 cc. of bouillon in which were numbers of pieces of teased gland. Inoculations were also made into the ear-vein of a rabbit and into the femoral vein of a guinea-pig. The dog was killed after two months and there were found enlarged cervical and inguinal glands and a number of hemorrhagic points in both lungs.

A piece of cervical gland was placed in Dunham's solution; after one week the portion was teased and bodies like those found in the gland of the patient were found.

Another piece of teased gland was placed on slant agar, and in one week's time a mould grew. A piece of lung containing some of the small nodules was planted on potato, and from it a very fine mycelium grew with some oidial bodies. This fine mycelium was found to be a streptothrix which was fatal to mice and guinea-pigs.

A third portion of teased gland was introduced intraperitoneally into a guinea-pig, and a portion of teased lung was placed in the peritoneal cavity of another guinea-pig.

Another portion of a gland obtained from the patient was teased and introduced into the peritoneal cavity of a guinea-pig, and it died in four weeks. There were, in the liver, nodules which contained bodies like those seen in the glands. We could not grow the bodies on any media.

Further experiments were not carried out because these peculiar bodies which were reproduced in the first guinea-pig were not definitely reproduced later. Unstained sections from the gland of the

patient were examined personally by Dr. Welch, and he definitely demonstrated them to be chalk deposits.

The patient returned again about three years later with a relapse on her nose. It was curetted thoroughly and inoculated subcutaneously into a guinea-pig. The guinea-pig died, and only the inguinal glands were enlarged, and in them were found many tubercle bacilli. Section from an excised portion from the diseased nose did not show the presence of any bodies at all. They were only found in the first lesions and were present in fairly large numbers.

The first reference to these bodies being present in tuberculous-like structure was made by Prof. E. Lang in 1875, and he thought they were Hassal's bodies, "*corpora amylacea.*" Sudakewitsch thought these cell inclusions were degenerate elastic fibers or the product of its changes. Colomiatti saw these bodies also, but no explanation was given. Schneppel refers to chalk deposits in giant cells. M. Pelagatti, in 1901, gives the last contribution to the subject, and he observes that these bodies occur in lupus tissue only rarely; since out of so many investigators of tuberculous tissues so very few have observed these bodies. In two cases Pelagatti did not find any tubercle bacilli. Cultures gave no tubercle bacilli, but yielded sarcinæ, torulæ and a blastomyces. Guinea-pigs and rabbits were inoculated, but no changes occurred in these animals. He then inoculated teased tissue beneath the skin of rabbits and guinea-pigs; the neighboring lymph glands became enlarged and caseated and were found to contain many tubercle bacilli. The cases were therefore lupus and belonged to the class of lupus myxomatosus. Rôna thought they were remains of elastic fibers in giant cells and the chalk deposits had occurred around these fragments. Pelagatti believes these bodies are the elements of a fungus which has positively no influence on the process.

What are we to make of this case? The first lesion showed fairly large numbers of apparently organized bodies; *i.e.*, they had definite forms and in some cases showed budding varieties. Most of them were situated in giant cells, but some were not. Tubercle bacilli could not be found in the tissue. Enlarged glands in the neck of the patient were removed and large numbers of similar bodies were found in these, and the majority of them had undergone definite calcareous degeneration. A guinea-pig was first inoculated intraperitoneally, and it died in a month. Small nodules were found in the liver. These nodules contained large numbers of similar bodies to those found in the glands and skin lesions of the patient. The bodies were present in necrotic areas in the liver and there were many commencing

pathogenic areas present in which no bodies could be found. No tuberculosis was present in the guinea-pig. This experiment shows definitely that these bodies were not inanimate objects, otherwise we would not get necrotic areas and such multiplication of these bodies. The death of the animal was apparently due to the presence and growth of these bodies. Further extended experiments with glands which were excised later from the patient did not lead to definite results. Pathogenic lesions were produced in a dog and guinea-pigs. Bodies similar to those found in the patient were found in the enlarged cervical gland of the dog which was killed. A mould grew in another case, and on one potato a pathogenic streptothrix was obtained. Nothing could be grown on any media direct from the lesions. The relapsed lesions five years later were undoubtedly tubercular.

DISCUSSION.

Dr. HARTZELL said that he failed to see how the authors had proved that it was one of tuberculosis. Originally, they succeeded in cultivating calcareous organisms, and five years later, after inoculating a guinea-pig, they found a single tubercle bacillus. A fresh infection might have occurred in the meantime, or the guinea-pig might have become infected from another source.

Dr. STELWAGON agreed with Dr. Hartzell. Of Dr. Gilchrist's numerous experiments originally, all the results proved negative, but four or five years later the tubercle bacilli were found in a single instance. It seemed to him that if we made a series of experiments and found absolutely negative evidence, we were hardly justified in forming positive conclusions from one successful experiment five years later; the latter might have been purely accidental, or in reality a new infection. He thought that we were apt to be too hurried in our conclusions in accepting a pathogenic cause of that kind simply because we eventually found an organism.

Dr. ENGMAN said that in Dr. Gilchrist's experiments, it seemed to him there were many loop-holes for error, and yet it made the case extremely interesting. He had seen the bodies described by the authors in one case which clinically resembled tuberculosis of the skin. He did not know what they were at the time. The point in Dr. Gilchrist's report was the probable polymorphism of the tubercle bacillus.

Dr. JAMES C. WHITE hoped Dr. Gilchrist would tell us how often he failed to find positive evidence of tuberculosis by the microscope or inoculation in cases which were evidently clinical tuberculosis.

Dr. CHARLES J. WHITE asked if Dr. Gilchrist could explain his inability to find any evidences of tuberculosis in the case originally? The hypothesis might be offered that the bacilli had died and become infil-

trated and surrounded by calcareous tissue, while in his later series of experiments the disease had again lighted up, the bacilli were more active and were not in a state of inspissation.

The Chairman, Dr. Bowen, said that he had seen these bodies two or three times. In one quite interesting case which he had thought of publishing they were quite constant. Briefly, the case was that of a girl of twelve, who had an ulcer on one forefinger, and another on the lip. The appearance of the lesions suggested verrucous tuberculosis. His attention at that time was being directed to blastomycetes, and he at once thought of that. Sections were taken from both lesions, and inoculations were made. He found a tuberculous structure, and in the giant cells were these peculiar bodies which he had little doubt were the same as Dr. Gilchrist had described. A careful search was made for tubercle bacilli in the tissue, but none were found. Rabbits and guinea-pigs were inoculated, but with negative results. In one or two instances the animals died rather rapidly from septic symptoms. What these bodies were he was unable to determine. Dr. Gilchrist spoke of observers who regarded them as degenerated elastic fibers, but he did not mention the recent work of Hektoen, of Chicago, in which a striking description of these bodies was given, which he regarded as degenerated elastic fibers. In his case, the calcareous covering could not be determined. They still had some of the material from that case, and he thought it would be interesting to look it up again. It was a question whether possibly these cases might not belong in some class by themselves. Tissue that could not be differentiated histologically from that of tuberculosis had been shown to exist in so many different conditions that it was possible that we had to deal here with bodies which were perhaps degenerated elastic fibers or calcareous deposits.

Dr. Gilchrist (closing the discussion): These bodies seemed to be undoubtedly organisms. They were in the giant-cells and about them, and the enlarged glands in the neck, which looked tuberculous, contained similar bodies in large numbers. The gland tissue, introduced into the healthy guinea-pig, produced lesions in the liver which contained large numbers of similar bodies. He was not acquainted with any calcareous degeneration of the tubercle bacilli. The best answer he could give to the criticisms which had been offered by some of the speakers was to exhibit the microscopic specimens of the skin lesion and of a diseased gland which he was ready to show.

A NEW DRUG ERUPTION OF THE IODOFORM TYPE.

By S. Pollitzer, A.M., M.D., New York.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE enrichment of our therapeutic resources through the introduction of new drugs has its disadvantages in the untoward and accidental effects sometimes following their use. Thus we have come to use many of the coal-tar products like antipyrin, with considerable caution on account of the severe, sometimes dangerous effects of these drugs on the vaso-motor system. Many of the newly introduced remedies have a special interest for the dermatologist, in view of the cutaneous lesions sometimes following their use. It is now about twenty-five years since the introduction of iodoform to the profession and in that time we have learned to esteem that drug at very nearly the value put upon it in the first flush of enthusiasm following its introduction. But we have also learned to use it with greater circumspection so that the cases of severe iodoform poisoning with their troublesome cutaneous manifestations and grave systemic disturbances are now comparatively seldom met with.

The improper or careless use of a valuable remedy may be followed by effects that may fatally impede its introduction to the profession and a knowledge of the possible bad effects of a drug must be welcome even to those who ardently advocate its use.

Among the many new remedies that have been put into the hands of the profession for the treatment of rheumatism *mesotan* gives promise of great usefulness. Introduced only a year ago, it is already the subject of a considerable literature, and the reports of its beneficial action in acute and chronic muscular and articular rheumatism are strikingly favorable. I have, however, no personal experience in its use as an anti-rheumatic, nor need that aspect of the drug detain us here. Mesotan is described chemically as a methyl-oxymethyl-ester of salicylic-acid. It is a clear, pale-green, oily liquid having an aromatic odor. It is used externally only, and it is advised to dilute the fluid with an equal volume of olive oil. The part affected is gently brushed with the diluted mesotan and lightly covered with cotton-wool or gauze. The local application is promptly followed by an agreeable sensation of warmth and tingling, and the skin often becomes reddened at the site of the application. Within a half hour after the external application of one dram of the drug, salicylic-acid may be detected in the urine; the reaction grows more pronounced

in the next few hours, and up to twelve to fourteen hours after its application salicylic-acid is still excreted (Roeder).

It is evident that in a drug of this kind, where the external application produces an immediate effect on the peripheral nerves and circulation, and where there is rapid absorption and conversion in the system into salicylic-acid we have opportunities afforded both for local effects of irritation and for the generalized disturbances such as have been observed after the ingestion of the salicylates.

In point of fact among the first observations of the drug the occurrence of localized erythema with vesiculation and of a more general urticarial eruption was noted. In a case of Roeder's* the decided redness which developed after the first application was regarded as beneficial, and the drug was not discontinued. The local inflammation increased in intensity and the arm became swollen, while vesicles developed on its surface. At the same time a generalized urticaria ensued. In a second case urticaria developed. In both cases the cutaneous disturbances disappeared promptly after the drug was discontinued. My own experience with mesotan dermatitis includes two cases which were referred to me for the relief of the cutaneous disturbance.

Case I. Mr. K. I., aged seventy-two, merchant, was advised by his physician to use mesotan for the relief of a chronic rheumatism affecting the fascia about the right knee. The undiluted drug was applied by gentle inunction daily for a period of nearly four weeks. Before the end of that time a decided dermatitis had developed on the part to which the application was made, but the patient persisted for a few days longer in continuing the application. When I saw him he had become alarmed at the extent of the eruption and had ceased the further use of the drug two days before.

I found the patient in bed and suffering severely from an itching and burning eruption which affected almost the entire surface. The right leg, to which the mesotan had been applied, was covered with a vesicular eruption on a diffuse erythematous surface, the vesicles in part broken and weeping, in part covered with serous crusts, and the entire extremity was greatly swollen. Over the surface of the trunk there were scattered irregular large and small areas of erythema; the skin over the forehead and the back of the neck was œdematous, red, and showed a few small vesicles; both upper extremities were somewhat swollen and red, and the anterior aspect of the right wrist was covered with vesicles. On the left leg there were only a few diffuse areas of erythema.

*Munch. Med. Woch., No. 50, 1902.

Except for the great suffering due to the itching and burning, which robbed him of sleep and lent an anxious expression to his countenance, the patient's general condition was good. He was directed to brush the affected region twice a day with an aqueous solution of ichthyol, one to three, over which a dusting powder was applied. Two days later the vesicles on the leg and the forehead had dried down into superficial crusts, but on the wrist the process had increased somewhat in intensity, and the ruptured vesicles were exuding serum. From this stage onward the inflammation gradually subsided without any unusual features, the surfaces affected finally desquamating in fine, branny scales, the burning and tingling ceasing with the disappearance of the acute symptoms; but the pruritus continued until the skin became entirely normal, the whole process lasting about two weeks. It may be added that the patient was cured of his rheumatism.

Case II. Mr. S. H., aged sixty-one, merchant, had been ordered daily applications of mesotan diluted with an equal volume of olive-oil for a subacute rheumatism of the right elbow. The applications had been made for a period of about ten days when they were interrupted by the dermatitis for the treatment of which he was referred to me. The eruption had appeared on the right forearm two days before, and this region was now the seat of a vesicular and crusted dermatitis extending from the elbow to the wrist, and the entire arm, forearm, and hand were greatly swollen and of a scarlet hue. The erythematous flush, with some œdema of the skin, extended in irregular and interrupted areas across the trunk to the left arm, and downward over the abdomen to the anterior aspect of the upper half of the thighs. The itching, tingling, and burning were almost intolerable.

Considerable relief was afforded by the application of ichthyol, and three days later the swelling of the right arm was materially reduced and the vesicular eruption converted into a dry and crusted one. On the left arm, however, the process had extended both in area and intensity. There was now considerably more œdema of the skin, and there were areas on the anterior aspect of the elbow and forearm dotted with vesicles. The ichthyol applications were ordered continued and in addition a modified Lassar's paste, in which five per cent. boric acid was substituted for salicylic acid, was applied once a day. Under this treatment the acute symptoms subsided and as in Case I. were followed by a period of furfuraceous scaling with very troublesome itching that lasted about two weeks. This patient also was relieved of his rheumatism.

In view of the wide extent of the dermatitis in both these cases, and its sudden development after relatively long-continued topical

application of the mesotan, I think we are warranted in assuming that the eruption was dependent on the drug in the circulation rather than on its external action on the skin. Though both these cases came to me too long after the cessation of the application to enable me to detect salicylic acid in the urine, there can be no reason, in view of the constancy with which this drug is found in the urine after the external application of mesotan, to question its absorption in these cases. Whether the eruption was produced at a distance through the intervention of the nervous system or through the efforts of the cutaneous glandular system to excrete the noxious substance, must be left undetermined, but I am inclined to regard the exanthem as produced through the action of the vaso-motor system. In favor of the latter view is the well-known action of the salicylates in sometimes provoking eruptions which are generally of the erythematous and vesicular or urticarial type. Quite recently several cases of an eruption following the ingestion of a drug closely related to mesotan—acetyl-salicylic acid, known as aspirin—have been recorded. Hirshberg[1], Meyer[2] and Otto[2] have noted the occurrence of an erythematous induration, affecting severely the head and the extremities in patches and accompanied by intense pruritus. These cases followed the ingestion of a single or at most two or three doses of aspirin, and presented true idiosyncrasies, and were not, as in my cases of mesotan dermatitis, the effect of prolonged action of the drug.

I have spoken of the mesotan dermatitis in my cases as conforming to the iodoform type, having in mind the cases of iodoform poisoning in which, in addition to a severe local action of the drug, there are effects produced at a distance.

DISCUSSION.

Dr. James C. White wished to ask Dr. Pollitzer how frequently this drug was used, and in what proportion of cases was it followed by such action?

Dr. Pollitzer said that the drug was a very recent production, about a year since it was first put on the market. There was already considerable literature upon the subject, however, perhaps fifteen or twenty articles, and they were strikingly favorable as regards the action of the drug in the treatment of rheumatism. It was likely that within the next year or two it would be very extensively used, and that cases of this eruption would come under the observation of all of the members of this association.

[1] *Deutsch Med. Woch.*, No. 27, 1902.
[2] Ibidem, No. 7, 1903.

TWO PECULIAR CASES OF FRAGILITAS CRINIUM.

By George Thomas Jackson, M. D.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

IT is a matter of experience that when one rare case is met with another will soon be seen. So it is that I have recently had as private patients two men presenting almost identical symptoms of a form of atrophy of the hair that I had never before seen, nor read, nor heard of.

Case I. On April 4th 1902, J. C., aged 26; single; clerk, was sent to me by Dr. J. E. Hoffman, of New York.

There was no history of any kind of hair trouble in his family. His general health was good though not vigorous, as he was able to take little outdoor exercise being closely confined in his office all day. Though he was rather nervous in his manner, he gave no history of nervous disorders.

About one month before coming to me he had his hair cut very short. He noticed that while most of his hair grew in a normal way there were patches in which his hair did not grow. This inequality in hair growth was so conspicuous that he applied for relief.

Examination showed that his hair was thinned over the whole top of his head, and that his scalp was bound down to his skull so closely that it was hard to move. There was no sign of dandruff. His hair was dry and lustreless.

The peculiar feature of the case was that there was a patch on the left side of the head near the site of the part, another on the right side, and another over the forehead, where the hair was short and curled up close to the scalp. These patches were sharply defined like patches of ringworm. They were prominent, as the rest of the hair was long. There was no sign of inflammation. No microscopical examination was made.

He was directed to scrub his scalp with tar soap, and to rub into the patches an oil composed of

Acid Salicylici.....2.
Tinct. benzoin.....2.
Ol. bubuli.....ad 100.
Ol. bergamot.....qs.

In six months the patches had disappeared, all the hair being normal in appearance.

Case II. On Dec. 3d, 1902. W. S. B., aged 55; married; lawyer, was sent to me by Dr. E. Wende, of Buffalo.

He was a very stout, tall man. His general health was good. He took no exercise because of his great weight, and passed most of the day in his office. He lived well, smoked about fifteen cigars a day, and worked hard. He had paralysis agitans of one arm.

His hair had been growing thin for some years. His present trouble began four or five weeks ago when he noticed on combing his hair that it was matted on the back of his head.

Examination showed that on the top of his head there were two well marked, round, sharply defined patches about the size of a silver dollar, in which the hair was short and apparently broken off. On the back of the head there was another patch in which the hair was broken off and curled close down to the scalp presenting an appearance similar to the curly hair of a negro. There were no signs of inflammation.

A microscopical examination made by Dr. Wende, of Buffalo, and Dr. Mewborn, of New York, disclosed no parasites, but showed many hairs with evidence of trichorrhexis nodosa. This patient, Dr. Wende informs me, made a perfect recovery in a few months.

Here then we have a form of atrophy of the hair occurring in male adults, coming on suddenly, and marked by the formation of sharply defined patches over which at first the hair is curled up close to the scalp, and subsequently breaks off. There was in both cases a progressive alopecia, and both patients were living unhygienic lives in that they were closely confined to their offices for the greater part of the time. In one case the excessive use of tobacco might be an etiological factor.

DISCUSSION.

Dr. Grover W. Wende said that he had recently seen the second case reported by Dr. Jackson, and had found the condition of the hair about normal. It was remarkable, in view of the original condition, that the hair should have returned to normal after so short a period. The treatment used was the one prescribed by Dr. Jackson, as suggested in his paper. This condition was unique, being limited to a circumscribed area and the fact that the hair at first was curly before breaking off. He spent some time looking for a fungus, but the results were negative. Sometimes the bulb was found to be atrophied.

Dr. Gilchrist had recently seen a rather curious affection of the scalp. The patient was a young lady, a member of a family in good standing. On the top of the head, involving an area of about two-thirds of the scalp, the hair, while apparently vigorous, would break off after attaining a growth of about half an inch. The hair was very stiff, auburn

in color, of good thickness and the hairs did not seem to have lost their lustre. Around the margin of the scalp, the growth of hair was apparently normal. Various methods of treatment were resorted to, without apparent benefit. He then suggested epilation, and pulled out probably a thousand or more hairs. This produced an improvement in the next growth of perhaps half an inch. There was no dandruff and he could find no micro-organism, nor was there any evidence of parasitic trouble. Subsequently the patient married, and whether the result of treatment or not, the hair grew longer. It was a very persistent and peculiar affection. He could make out no disease of the hair.

In connection with Dr. Jackson's paper he would like to call attention to the observation made by Hodara that after immersing hairs affected with tricorrhexis nodosa in absolute alcohol for twenty-four hours these was obtained a pure culture of a bacillus which he (Hodara) found in the diseased portion of the hair.

He would also like to mention the case of a young woman who came to him suffering from what the hair-dressers call "hair eaters." They resembled nits, but on inspection proved to be small calcareous concretions situated on the hair, about half an inch from the scalp.

Dr. Pardee recalled a case similar to those reported by Dr. Jackson, but occurring in a woman 45 years of age. The condition was apparently the same as that described by Dr. Jackson, but the patches were symmetrical and involved the anterior border of the hair. The curling of the hair resembled that seen in the Negro. The hair was brittle and broke off readily. The patient recovered completely under local massage with mild stimulating lotions.

Dr. Charles J. White: The cases reported by Dr. Jackson recalled that of a young college student who came under his observation. He weighed over two hundred pounds and was in the best of health. His hair was very blonde, due to the loss of pigment, and the hair was short and thin and nodular—a condition the Germans called *Ringelhaaren*. The affection was unassociated with any parasitic infection which could be discovered after careful bacteriological examination.

In regard to the remark made by Dr. Gilchrist concerning the long survival of the trichorrhexis nodosa in absolute alcohol, would state that Dr. Harrington, of the Harvard Medical School, had found that a fifty per cent. solution of alcohol was a more potent agent in the destruction of bacteria than absolute alcohol; he demonstrated conclusively that fifty per cent. solution of alcohol had the most powerful bactericidal action of any strength which one could use.

Dr. Jackson (closing the discussion), said that he was very glad to hear Dr. Wende's further report of the case. Both cases, in their manner of beginning and ending, were suggestive of a neurotic origin. He had seen two cases like the one reported by Dr. Gilchrist. One was a little

girl whose hair broke off after growing to a short length. The other was a hysterical woman who suffered from intense headaches, and after each headache the hair would break off close to the scalp. It would then grow as usual until the next nerve storm destroyed it.

He thought the occurrence of tricorrhexis nodosa was far more common than was generally supposed. He was constantly meeting with this bulbous condition of the hair in the long hair of women,—the hair breaking off through the bulb. If it were a parasitic affection, it must be due to a parasite far more common than had been thought. He was rather inclined to think it was not parasitic, but due to an interference with the nutrition of the hair from more than a single cause.

Dr. Hartzell knew of one physician in Philadelphia who claimed that he could always infect his tooth-brush with trichorrhexis nodosa.

Dr. Stelwagon said that certain German authorities had found the same formations upon brushes which had never been used.

NOTE ON A RAPID METHOD OF DIAGNOSIS IN LEPROSY.

By Francis J. Shepherd, M.D., of Montreal.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

CASE: The patient, a Chinese laundryman, *æt.* 19, named Hum Sam, was admitted into the Montreal General Hospital, April 17, 1902. He left China two years ago and has lived in Montreal ever since. Until September, 1901, was quite well. At this time there was redness and thickening of the skin on the forehead. This was soon followed by erythematous patches on the arms. This eruption was very itchy; was much worse in warm weather and cold seemed to improve it. From thence it extended over the body.

The patient is a well-made young man, of fair intelligence. On the forehead are seen reddened areas of thickened skin from the size of a 20-cent piece to a 50-cent piece. Some of these patches are fused together; there are also similar patches on the face, on cheeks and temples. These patches are not painful, but are very itchy at times. On the arms, especially on the exterior surfaces of the elbows, are round and oval areas, covered with small whitish scales. The scales are more at the margins of these patches, the center being of smoother appearance and brownish yellow in color. These areas are distinctly anæsthetic, some more so than others. Similar patches are seen on the trunk and legs, but these are not so numerous as on the arms. The patches are raised above the surrounding skin and are

all covered with branny scales of a yellow-brown color. They are especially well marked on the buttocks, where they have somewhat the appearance of an old psoriasis.

Both external jugular veins are easily felt, and seem to have much thickened walls, which make them feel like cords. There is no tenderness on pressure. The glands in the posterior cervical triangle behind the sterno-mastoid are much enlarged. The inguinal and epitrochlear glands are increased in size. The hands are perfectly free from nodules and are apparently normal.

Both ulnar nerves behind the elbow are distinctly thickened and nodular, especially on the left side. The musculo-spiral nerve is also slightly enlarged. There is also some enlargement of the external popliteal nerves at the knee joints.

It was very difficult to get any information out of the patient, even through an interpreter, chiefly because it was not given willingly. It was important to make an accurate diagnosis, as the city authorities wished to have the man sent back to China if the case were positively one of leprosy, the Canadian Pacific Railway having agreed to transport him free of charge. So I decided, to make the diagnosis sure, to cut down and remove a portion of one of the ulnar nerves. This was done and a nodule removed. Dr. J. McCrae, our Pathologist, examined the nodule and without trouble found numbers of the leprosy bacilli, which, of course, definitely established the diagnosis.

DISCUSSION.

Dr. Frank H. Montgomery said that Dr. Hyde and he recently had their attention called by Dr. Z. F. Barker to the early involvement of the great auricular nerve in leprosy. Professor Baelz, of Tokio, Japan, found that this nerve was involved in 90 per cent. of all cases of anæsthetic leprosy, and much earlier than the ulnar nerve. The nerve was easily accessible and its involvement was readily detected. In a case of anæsthetic leprosy which came under Dr. Hyde's observation three months ago, in which there were but few symptoms, the auricular nerve was found to be as large as an ordinary lead pencil, while the ulnar nerve was but slightly enlarged.

Dr. P. A. Morrow thought that in a case where the clinical symptoms were as pronounced and as characteristic as in the case reported by Dr. Shepherd, the bacteriological confirmation of the diagnosis was scarcely necessary. About sixteen years ago he recalled seeing a similar case of anæsthetic leprosy in which he had suggested a similar procedure, but in that instance the symptoms were asymmetrical and not at all characteristic, excepting in the right lower extremity.

At the last meeting of the New York Dermatological Society, Dr.

Mewborn exhibited some slides showing the lepra bacillus obtained from the nasal secretions. He was somewhat interested in this line of experiments, because he believed that the nose was the primary seat of the localization of leprosy, and as he was the first one to announce this, he had been surprised that the profession in this country had paid no attention to it until the appearance of Jeanselme's work, which rather confirmed bacteriologically what he had claimed existed upon a clearly clinical basis. In a very large proportion of these cases, the identification of the lepra bacillus in the nasal secretions, could be very easily made. It had been his custom in quite a number of cases which had come under his observation during the past three or four years to apply this test, and he thought it had seldom failed.

Dr. S. Pollitzer: While the confirmation of finding the lepra bacilli in a bit of the excised nerve was final, he would like to ask Dr. Shepherd what he would have done in a case in which the clinical symptoms were clear, as in the case described, had he not found the bacilli?

Dr. Shepherd knew of the fact mentioned by Dr. Morrow, but in the case reported there was absolutely no nasal secretion.

He expected to find the lepra bacillus in the excised portion of the nerve, and was not disappointed.

NOTICE.

The fifth International Dermatological Medical Congress will meet in Berlin, September, 1904, from the 13th to the 17th of the month. The following subjects have been selected by the officers of the congress for discussion:

(1) The syphilitic affections of the circulatory apparatus.
(2) The diseases of the skin in anomalies of Metabolism.
(3) Epitheliomas and their treatment.

James Nevins Hyde,
Secretary for America.

ABSTRACTS.

The Treatment of Scabies with Eudermol. O. Marenbach. (*Montshft. f. prkt. Dermat.*, 1903, XXXVI., p. 523.)

Eudermol is a combination of nicotine and salicylic acid. It is used as an ointment with vaseline and in the strength of one-tenth of one per cent. In scabies it is an agreeable remedy, as it is colorless and odorless, rapidly stops the itching, and is unirritating. It is rarely poisonous, and if it is, the poisoning is not dangerous, and can be readily relieved by black coffee.—G. T. J.

"Erythema Multiforme and Lupus Erythematosus: Their Relationship to General Toxaemia." James Galloway and J. M. H. MacLeod. (*Brit. Jour. of Dermat.*, 1903., XV., p. 81.)

The first of the two cases reported was a woman of twenty-one years who presented symmetrical red patches on the cheeks which met across the nose and involved the eyelids, chin, and back of ears. There was some desquamation and crusting, while the patches on the dorsal aspect of the hands and feet were erythematous blotches, several of which were slightly raised and discoidal. On the arms and forearms there were erythematous macules and blotches tending to form vesicles and bullæ and finally to become covered with scabs or to ulcerate and slough. The patient ran an irregularly remittent temperature, varying between 99 F. and 105 F. for one month (about the length of time under observation at the Charing Cross Hospital), developing a nephritis and terminating in convulsions and death. Although there was great difficulty in determining whether the skin condition was an exceptionally severe *Erythema multiforme* or an acute generalized *Lupus erythematosus,* there was no doubt in the minds of the authors that the relation between the violent dermatitis, which so severely complicated the malady, was a result of the severe toxæmia which also caused the fatal nephritis. The autopsy showed signs of a severe tubular nephritis without any signs of typhoid or other specific infectious disease.

The appearance of the epidermis under a microscopical examination of a lesion on the little finger was not that of eczema,—there was not the general profound œdema, nor was the interference with the process of cornification so marked. Nor did it correspond with Lupus erythematosus, for there was no thickening of the horny layer nor plugging of the follicles, such as occurs in that disease. It suggested far more closely Erythema multiforme or Herpes zoster.

The second case, also a woman, aged about 36 years when first observed in 1897, had a typical Lupus erythematosus eruption on the face,—symmetrical, with some œdema. In 1898 she was presented to the Dermatological Society and at that time there were numerous patches on the arms, elbows, forearms and backs of hands. Most of the proximal phalanges were occupied by patches of erythematous and infiltrated skin, resembling in distribution the lesions in some cases of Erythema multiforme. There were in addition similar patches on the palms, vertex, back and lower extremities. Superficial atrophy of the skin could be observed in areas previously occupied by much more extensive patches of erythema. The patient ran an almost continuous pyrexia. Repeated examinations failed to reveal any traces of pulmonary tuberculosis. In 1899 she was again brought before the Dermatological Society with a developed and characteristic *cirrhosis of the liver.* It was also ascertained that the patient had been for a long time indulging in the excessive consumption of alcohol. In view of the recent theories as to the causation of Lupus erythematosus, it is noteworthy that in this severe attack of the disease, in which the type of Erythema multiforme was closely approached, the only cause capable of producing a toxæmia of marked degree was chronic alcoholism with cirrhosis of the liver. The patient died shortly after and no autopsy was obtainable.

In both of the cases described general toxæmia of severe degree existed. The effects produced corresponded in the one case to the rapid action of a virulent toxin circulating in the blood and causing an acute inflammatory disturbance in the skin leading to a fatal termination in a few months, and in the other to the action of a more or less virulent toxin, prolonged for years, and setting up a more chronic type of dermatitis. These observations seem to support the conclusions of Dr. Wilfrid Warde (abstracted in the February, 1903, Journal of Cut. Dis.) that the absorption of pyogenetic toxins may result in one of the forms of toxæmia concerned in the production of Lupus erythematosus.—Mewborn.

Granuloma Herpetiforme Exoticum. Bosellini (*Monatshft f. prakt. Dermat.*, 1903—XXXVI.—701).

The disease with the above title affected a man engaged in coffee planting in Brazil. It began three years after he began the work and one year before he returned to Italy. It appeared first on the back of the left foot as a few small lumps, which slowly increased in number and size so as somewhat to interfere with walking. The disease spread so as to involve the extremities and face, the trunk remaining free. With the appearance of new lesions the old ones disappeared leaving red and pigmented macules. The patient felt ill, weak; had pains in his bones, and annoying itching and burning. The patient was admitted into the hospital and watched. It was found that the primary lesions were acne-like, vesico-pustular in character, that the disease ran a chronic course, new lesions constantly appearing with a certain symmetrical distribution and showing a preference for the flexure surfaces of the extremities, and grouping in a herpetiform way. The lesions were inclined to undergo spontaneous involution through degeneration and absorption leaving an atrophic and pigmented spot. Anatomically the disease was found to be a granulomatous, nodular, and suppurative process, the granulomata consisting exclusively of plasma cells and capillaries. Only the usual pus micro-organisms were found. Resorcin cured the patient in a short time. G. T. J.

"Granulosis Rubri Nasi." (Jadassohn.) J. M. H. MacLeod. (*Brit. Jour. of Dermat.*, 1903., XV., p. 197.)

The case was a boy aged six who since his first half year of life had suffered with a persistent patch of redness on the tip of his nose which was almost constantly moist with beads of perspiration. Three months prior to examination the upper lip became involved, at first with beads of perspiration with the development, quite recently, of inflammatory lesions. The lesion on the nose consisted of a symmetrical, hyperæmic patch extending from the tip to the bridge of the nose and spreading out laterally on the alæ. The most permanent feature of the patch was the presence of a large number of discrete, brownish red macules and micro-papules which faded completely on pressure with a glass slide leaving no stain as in Lupus vulgaris. These pin-head, rounded, or acuminate papules gave to the surface its granular feeling, which suggested the name of "Granulosis" to Jadassohn. The beads of sweat which stood on the patch and gave to it the glistening appearance were alkaline in reaction and were independent of the papules, but there were a few small translucent papules, which suggested underlying vesicles.

The subjective symptoms were slight—mild itching which principally affected the upper lip. A microscopical examination was not so successful as in the case described by Jadassohn and Pick, who found the leading pathological changes were located in the corium. A more or less dense infiltration of leucocytes around the papillary vessels without any changes in the vessel walls. The lumen of the sweat coils was irregularly widened and contained a finely granular *débris* while the walls of the coils were markedly thickened. The general histological picture suggested a chronic inflammation which had its origin in the vessels around the sweat-apparatus. Treatment was rather unsatisfactory although the history of other cases showed a spontaneous disappearance upon reaching adult life. The disease seems to be peculiar to the young, mostly boys in the cases reported. It affects weakly children and especially those with weak peripheral circulation—cyanosed hands, feet, and lips and hyperidrosis of these parts. The real nature of the disease is unknown, the author suggesting a vaso-motor derangement with secondary hyperidrosis and resulting inflammatory reaction due to the alkaline reaction of the perspiration.—Mewborn.

One Cause of So-called Iodoform Eruptions. Ch. Audry (*Monatshft f. prakt. Dermat.*, 1903—XXXVII.—26).

One cause of iodoform eruptions is thought by Audry to be the use at the same time upon the same patient of iodoform and mercurial preparation. He believes that in many cases the eruption is an iodine-mercurial exanthem. Since he no longer gives mercury while using iodoform he has had few cases of iodoform eruption. G. T. J.

Acute Symmetrical Erythematous Keratodermia, caused by the Administration of Arsenic. R. Prosser White. (*Brit. Jour. of Dermat.*, 1903, XV., p. 21.)

The author reports the case of a boy aged thirteen years who was given four minims of liquor arsenicalis every four hours for an attack of chorea. After ten days' treatment, when the dose had been increased to ten minims every four hours, the physiological effects of the drug manifested themselves as a severe irritation of the eyes, running at the nose, silver-coated tongue but no vomiting or diarrhœa. The drug was discontinued. In the evening, erythematous symmetrical patches, rose-pink in color, appeared over all the metacarpophalangeal and phalangeal joints. Thenar and hypothenar eminences appeared as light yellow, lemon colored islands, surrounded by erythematous rings. There appeared erythematous zones at the flexures of the wrists, extensor surfaces of the elbows and at all points where pressure was brought to bear, as, for instance, over the spines of the scapulæ, buttocks, great trochanters of the femurs, inner aspect of the knees, over the malleoli, and along the outer margin of the feet. The soles of the feet were affected similarly to the hands. In two days the zones were of a violet-brown color, beginning desquamation in the centers and all tenderness had gone. Two weeks later the zones were of a brown color and large scales of epidermis peeled off. Hairs and scales were examined for arsenic but with negative results. One month after the toxic symptoms appeared the case was discharged cured of his chorea and without any trace of his arsenical pigmentation.

The author considers the case as interesting from the rarity and incompleteness of the description of acute arsenical dermatitis usually given in the textbooks; the extraordinary selective activity arsenic exhibits in the skins of certain very susceptible persons; the close resemblance (except in point of time) the acute symptoms bear to the skin lesions found in chronic cases of arsenic poisoning; the danger of aggravating acute skin diseases by the injudicious giving of arsenic. The author considers that possibly some impurity in the arsenic or some other drug administered with the arsenic might have aggravated the susceptibility.—Mewborn.

Lupus Erythematosus: Some Illustrative Cases. Wilfred B. Warde, (*Brit. Jour. of Dermat.*, 1903, XV., p. 162.)

The author analyzes about seventeen cases of Lupus erythematosus from his own collection and that of other English dermatologists in which he emphasizes the views he has already advanced, viz., that Lupus erythematosus is not a disease, but merely a stage in the course of many different affections—a step in the pathological ladder by which a damaged part, unable to achieve its own repair, is destroyed and replaced by fibrous tissue. In a certain class of individuals the repair is indefinitely prolonged, till it may appear to be altogether postponed, and then the condition becomes known as Lupus erythematosus. He admits that his theory had been somewhat anticipated by Dr. Galloway, who (*Brit. Jour. of*

Dermat., 1899, p. 288) reports a case of Erythema multiforme passing into Lupus erythematosus, and made the remark "that the *scar-leaving erythemata* were of various origins, and that the thesis so recently advanced, namely, that they were all of remote tuberculous origin, would not bear critical examination."—Mewborn.

Malum Perforans Pedis. Thomasczewski (*Münch Med. Woch.*, No. 20, 1902).

This affection was first described in 1852 by the French. Soon after it was discovered that these ulcers were attended with a diminution or complete absence of sensibility to pain both in the floor of the ulcer and in the immediate vicinity. There was also proved in many cases to be a marked degeneration of the nerve fibers which supplied the seat of the ulcer. Later still it was found that this affection was sometimes associated with tabes, as well as cerebral, spinal, and peripheral nerve lesions, diabetes, and finally with arterio-selerosis. In spite of this the essential cause of this remarkable affection has been still in doubt, some contending that continuous compression with anæsthesia produces it, others believing that special trophic lesions, must be assumed; while others still consider local lesions of vessels causative. The writer believes that all these different views are correct, and that all the factors that have been enumerated are causative in certain cases. He then relates ten cases of malum perforans in which the affection accompanied tabes, leprosy, diabetes, or spinal or cerebral affections. In all these cases ulcers were found on the feet which were identical in their seat, development, form, and course. They were situated on the parts of the soles most exposed to pressure, and were almost always preceded by a local hyperkeratosis. It is considered that pressure plays an essential part at least in determining the seat. There is no doubt that these ulcers develop while there is complete anæsthesia of the parts in many cases, but not always, so that the anæsthesia cannot be looked upon as causative. With regard to changes in the vessels, various observers have recorded absence of the foot pulse, atheroma and endarteritis.

With regard to constitutional affections, it is well known that this affection is associated not infrequently with diabetes. It is known that the resistance of the tissues is diminished in diabetes, but it is questionable whether that is the only etiological factor. We know that neuritis is extremely common in diabetes, and the changes in sensibility may be connected with this phenomenon. On the other hand, some cases of malum perforans associated with diabetes present a normal sensibility.

The writer thinks that inasmuch as the combination of pressure and anæsthesia are not sufficient to explain the clinical causes of malum perforans, we must have recourse to the theory of trophic tissue changes. This view is acknowledged to be little more than theory, as we have no proof of the existence of trophic nerves or of trophoneurotic skin affections. The writer regards the etiology of this affection as complicated. Pressure undoubtedly plays a part, as well as anæsthesia oftentimes; while in other instances arteriosclerosis, diabetes, cerebral and spinal affections are responsible. Hence each case should be carefully examined, the foot pulse examined, the urine tested for sugar, and a careful examination of the nervous system should follow. Bowen.

Prophylaxis of Mercurial Enteritis. Dr. L. Gore (*Monatshft f. prakt. Dermat.*, 1903—XXXVI.—723).

Dr. Göre found that he could control the mercurial enteritis of a peculiarly susceptible patient by giving three times a day a coffeespoonful of Zymin. Under this treatment the mercury could be continued. G. T. J.

Mycosis Fungoides, and its Treatment by the X-Ray. W. Allen Jamieson. (*Brit. Jour. of Derm.*, 1903, XV., p. 1.)

The author gives the history of two cases of this rare disease. The first case, an engineer of sixty-six years of age, presented a type showing erythrodermia and diffuse superficial infiltration followed by extensive ulceration of the surface without the tendency to the production of massive granulomatous infiltrations or tumors. The first symptoms, about a year previously, had been those of a dry and scaly, subsequently of a moist and crusted eczema, but the sequences were wholly at variance with that of eczema; *i. e.*, intractable ulcers and in places deep abscesses. There were no tumors strictly speaking, yet the microscopical appearances and the fatal termination were quite compatible with the diagnosis of mycosis fungoides. There was no reason to believe that the syphilis from which he had suffered long before had any relation to his ailment —specific treatment was rather detrimental than otherwise. The second case, a woman aged fifty-four years, exhibited features quite unmistakably those of classical mycosis fungoides. The prolonged prodromal period, with dry, circumscribed, intensely pruriginous areas, and the eventual development of characteristic tumors, rendered identification unequivocal. The microscopical examination also was confirmatory. The special interest in the case, however, was the immediate and satisfactory results from repeated exposures to the X-ray. Not only did the tumors melt away but the thickened patches likewise disappeared and with them the itching. There was same recurrence in the scalp where the hair masked the earliest traces. In the treatment a soft tube was employed at a distance of four inches for three to five minutes, the interruptions being of medium rapidity. While the cure could not be considered as complete, yet all the tumors had completely disappeared after sixty days of exposures, the two half-tones which illustrate the article show the æsthetic result. The author thinks that all circumscribed, very itchy and rebellious eczematoid eruptions should be regarded with suspicion and ought to be subjected, if at all possible, to the rays.—Newborn.

Mycosis Fungoides. J. H. Stowers. (*Brit. Jour. of Dermat.*, 1903, XV., p. 47).

In his Presidential address delivered at the October, 1902, meeting of the Dermatological Society of Great Britain and Ireland the unsatisfactory state of our knowledge upon this rare disease is reviewed with an analysis of thirty-one cases reported by various dermatologists. The author after showing how difficult the diagnosis is in the earlier stages, (a case of his own, which he gives in detail, having been treated for a number of years in various parts of the country as eczema, psoriasis, urticaria, and lupus) insists that however much individual cases may vary in their circumstances and detail, there is no small degree of similarity between the varieties of the disorder—viz., those in which recurrent or persistent forms of dermatitis, simulating other disorders, occur, followed, perhaps, after many years of suffering by the development of nodules and ultimately proving fatal; and, secondly, those characterized by the early or immediate evolution of tumors which undergo secondary changes, terminating in death more rapidly than in the first variety. Of the three hypotheses as to the nature of the disease advanced by Hyde and Montgomery, viz.—(1) That the disease belongs to the class Sarcomata. (2) That it is one of the infective granulomata. (3) That it is a disease commencing with a primary lesion with evolution of symptoms in definite stages analogous to those of syphilis, one or more of which may be at times suppressed,—he discards the first as not sufficiently constant to explain its pathology, and the third as lacking corroboration. He favors the second hypothesis, heartily recommending the work of Galloway and MacLeod

(*Brit. Jour. Dermat.*, May and June, 1900) who state that from their findings in the three cases studied, that Mycosis fungoides was histologically distinct from the class of Sarcomata. That "the cellular infiltration which is so abundantly present in all our preparations resembles far more closely that presented by the infective granulomata than that shown by any of the true neoplasms."—Mewborn.

Some New Remedies. D. J. Sellei. (*Montshft. f. prkt. Dermat.*, 1903, XXXVI., p. 503.)

Mention is made in this paper of Mercuro-Crême, Dymal, and Pyoktanin. Mercuro-Crême is a solution of stearate of potassium in glycerine with 33⅓ per cent. of mercury. It seems to be as efficient as mercurial ointment for inunctions in syphilis, and is neither dirty nor bad smelling. It dries very rapidly on the skin, so that the inunctions must be made rapidly. Dymal is a dusting powder. It is slightly antiseptic, and tends to check secretions. In ointment form, 5 to 20 per cent., it has been found useful in dermatitis and eczema. Pyoktanin, which is by no means a new remedy, is now commended in ulcus gangrænosum in strength of 1 to 200.—G. T. J.

A Rare Seborrhoide of the Face. J. J. Pringle. (*Brit. Jour. of Dermat.*, 1903, XV., p. 41.)

The patient, a highly intelligent woman of 39 years, although a total abstainer from alcohol, was a great tea-drinker and in her occupation as housekeeper to a large establishment was much exposed to an open fire. At first the eruption appeared on the nose and chin, spreading to the cheeks and forehead and was labelled "Seborrhoic eczema." Under internal and dietary treatment for atonic dyspepsia, the general dermatitis of the face cleared up sufficiently to show the peculiarities of the underlying and doubtless essential condition, which six months later was presented before the Dermatological Society as a case for diagnosis. The characteristic feature of the case at that time was the presence of innumerable, pin-head to split-pea sized, nodular prominences superadded to the rosaceous condition covering the face and contiguous part of the neck. Over the cheeks, lips and chin the lesions rise abruptly from the skin level, are firm to the touch, and their rounded summits refract light brilliantly so that an appearance of vesiculation is simulated. The majority are pink in color but under pressure their color is brownish and their appearance gelatinous or colloid. Nowhere is there any comedo formation, vesiculation or pustulation.

A microscopical examination of one of these papules taken from the neck showed a marked infiltration of mononuclear and polynuclear leucocytes around the deeper part of the hair follicle. There were no plasma or mast-cells nor changes in the horny layer. There was no acanthosis or abnormality of the hair shaft. The sebaceous glands were enlarged but not to the extent found in sebaceous adenoma. Complete recovery took place under a strong sulphur-resorcin paste.—Mewborn.

Staitinoderma. Dr. A. Baginsky. (*Berliner Klinische Wochenschrift*, May 11, 1903.)

Staitinoderma (dough skin) is the name by which Baginsky designates what he believes is a new dermatosis. The patient, a girl of five years of age, was presented at a meeting of the Berlin Medical Society. Following convalescence from both diphtheria and measles, the mother noticed, last February, after a few days of general indisposition, that the skin of the child's neck presented a peculiar hardness; shortly afterwards the face, arms, breast and other parts of the body became affected.

On examination, the temperature, pulse, blood and urine were found to be normal. The skin of the entire body, with a varying degree of intensity, feels as hard as a board and presents a certain elasticity like gutta-percha. The surface of the skin is smooth, of normal color and non-scaly. All parts of the face, even the eyelids, are affected; there is a small area of normal integument surrounding the mouth. The most peculiar feature of the case is the fact that the disease is not limited to the skin, but involves the superficial fascia, and in places extends even into the muscles. The sensibility of the skin is not affected. Motility is also preserved. The child jumps about and moves as easily as normal. The tongue is involved, being smooth, thickened, hard and elastic. Swallowing and speech are normal. The skin and muscle reflexes are normal. There is no ataxia.

In the discussion, Lassar stated that it was indeed a rare case, but that he had under observation an adult who was similarly affected. He preferred to call the disease scleroma.—H. G. Anthony.

A Review of Prof. v. During-Pascha's Report on Endemic and Hereditary Syphilis in Asia-Minor. Dr. George Ogilvie. (*Brit. Jour. of Dermat.*, 1903, XV., p. 11.)

From Prof. von Düring's report on his two years' study of the endemic syphilis which has raged for forty years in the Vilajet of Castamuni (Asia-Minor) published in the *Deutsch. Med. Woch.*, (1902, pp. 12, 13, and 23), and in the *Archiv. fur Derm.*, (1902, pp. 61, 74), Dr. Ogilvie has "distilled" this interesting summary, which is "clear" and "sparkling" enough, although somewhat "strongly flavored" with the prepossessions of the two authors against the French syphilographers. To briefly mention some of the generalizations of this report which covered the examination of about 65,000 people and altogether of more than 30,000 cases of syphilis, and among whom specific treatment was practically unknown, there was first the preponderance of accidental over venereal infection and the frequency of tertiaries. While in Europe the *proportion of accidental to venereal infection* is at the utmost 5 in 100, the inverse proportion, according to v. Düring, came nearer to the truth in Asia-Minor, although he was unable to give even approximately exact numbers. The principal vehicles of infection were drinking vessels, the "nargile" or waterpipe, the razor, and the cigarette, which is considered and used as common property. Although acquired syphilis was quite frequent in children, v. Düring was not able to detect the primary lesion in an infant or child.

In all previous reports on endemic syphilis the *proportion of tertiaries to secondaries* is given as about 2 to 1. According to v. Düring's opinion 1 to 2 would be about the correct frequency of tertiaries to secondaries. The errors in the observations of other reporters he attributes to: (1) The peasants, as a rule, do not seek medical advice for secondaries, because they do not attach any importance to them. (2) All people escape registration during the periods of latency. (3) Without treatment tertiaries persist about twelve times as long as secondaries; consequently the same individual will figure in these statistics for years. (4) In an "extinct focus," i. e., where in the course of years all inhabitants are infected—a by no means rare occurrence—only cured people, or those suffering from tertiaries, are to be found. As the proportion of tertiaries to secondaries in Europe is about 1 to 10, although no reliable statistics exist, the question at once arises—What is the reason for this increased frequency? The precocity, frequency, gravity, and long duration of tertiaries in endemic syphilis are considered to be really due to the *want of treatment*. Destructive processes of the palate, pharynx and the nose constituted about 40 per cent. of all ter-

tiaries; the tongue was frequently affected (in about 6 per cent. of the cases). An excessive vulnerability of the oral mucous membrane with an increased sensitiveness to the internal administration of mercury the author attributes to the wretched quality of the bread used. Leukoplakia is frequent even outside of the domain of syphilis. Tabes he has seen only three times among the population of towns, never in the country. In only one case was there a history of syphilis—v. Düring is an opponent of the syphilitic origin of tabes. Alcohol is almost unknown. In regard to hereditary syphilis v. Düring has collected *more than one hundred cases* in which the children of parents who before marriage unquestionably suffered from acquired syphilis, contracted fresh syphilis. Therefore "Profeta's Law"—in its enlarged, as well as in its original restricted meaning—*"shrinks into naught."* With regard to the infectiousness of congenital syphilis, he expresses himself with great reserve. He does not deny it, but he states that he had never seen an exception to Colles' law. He likewise has never seen a healthy nurse infected by a congenitally syphilitic child, although he knows of several cases in which apparently healthy women have suckled children—not their own—affected with severe congenital syphilis. Prof. v. Düring failed to find the marked dystrophic influence of hereditary syphilis and its degenerating influence upon racial development, which evidently pleases Ogilvie, as he launches into a two-page diatribe of what he terms "the present tendency of the French school towards pansyphilism seems itself to be a kind of professional neurosis." Finally, Prof. v. Düring discusses the diagnostic value of the different symptoms of late hereditary syphilis. It is interesting to learn that affections of the joints, in particular of the knee-joint, occurred "with remarkable frequency" in his experience, while interstitial keratitis was "exceedingly rare."—Mewborn.

Concerning Inherited Immunity to Syphilis and the so-called Profeta's Law.

Dr. M. Tschlenow. (*Montshft. f. prkt. Dermat,* 1903, XXXVI., p. 489.)

The so-called Profeta's Law is that children of syphilitic parents, in most cases at least, enjoy for a certain time an immunity against syphilis. This law has many exceptions, especially as far as it concerns the inheritance of the disease from the father. Any immunity that may be acquired from the father would seem to be exhausted in a short time. It would also seem that tertiary or spent syphilis in the parents confers very much less immunity to the children than does active syphilis, and that any such immunity is very rapidly lost. It is nevertheless true that apparently healthy infants born to syphilitic mothers do not, in most cases, contract the disease from the mother. (In this article are cited many cases. For those interested in the subject it is well worth careful study.)—G. T. J.

About the Agglutination of Tubercle Bacilli in Tuberculosis of the Skin.

Robert Herz (Prof. Pick's Clinic). (*Arch. f. Derm. u. Syph.,* 1903, LXIV., p. 213.)

The writer endeavored to determine the diagnostical value of agglutination in skin tuberculosis. Thirty-one patients with various tubercular eruptions upon the skin, as lupus, tuberculosis cutis, scrophuloderma and lichen scrophulosorum were supplied with required serum. His conclusions are that the serum reaction is not available for diagnosis of tuberculosis of the skin.—Lapowski.

The First Congress of the German Society for Combating Venereal Diseases.

Held at Frankfurt, A. M., 1903. (*Zeitsch. f. Bekämpf. der Geschlechts Krankheiten,* 1903, I., p. 99.)

The fight against venereal diseases is beginning to assume a serious aspect. Started in France and Belgium, at present it engages the attention of the German thinking men in the serious problems involved. The German Society, after

a few months of existence, reached a membership of 1,600, and its members are scattered in nearly all large cities of Germany. The first Congress was held under the auspices of Professors Neisser (Breslau), Lesser (Berlin), and Dr. Blaschko (Berlin), with the collaboration of well-known jurists. The question of punishment for knowingly spreading venereal disease came under discussion, and the participants in the debate were against punishment. Dr. Neuberger's proposition to give to every patient slips with printed explanations of, the character and importance of the diseases was accepted. (Dr. Cabot introduced the same idea in his class in the Presbyterian Hospital of this city a year ago with very satisfactory results.—L.) The very important question, whether sexual abstinence is injurious for the individual came under consideration, and Prof. Erb expressed the opinion that he sometimes observed cases of neurasthenic and hysteric disturbance in both sexes owing to sexual abstinence. Great stress was laid upon the question of sanitary dwellings as connected with the propagation of venereal diseases. All recognized the importance of this point and urged the adoption of measures to abolish unsanitary dwellings.

The last point under consideration was the regulation of prostitution. The opinion that the present German system of police supervision was inadequate and wrong was prevalent, except in the opinion of some police officials. It was agreed that prostitution itself is not to be punished, but the propagation of venereal diseases either by means of prostitution or other nefarious action. No definite means as to how this result might be attained were adopted. The participants in the Congress were against the institution of so-called "Bordele," but were rather inclined to give up certain streets to prostitutes, so-called "Kontrollstrassen," such as exist in Halle and Bremen.

The transactions of the Congress will be published in the *Zeitschrift für Bekämpfung der Geschlechtskrankheiten*, a new journal dedicated to that purpose.—Lapowski.

BOOK REVIEWS.

Photothérapie et Photobiologie; rôle thérapeutique et rôle biologique de la lumière. Leredde and Pautrier. (C. Naud, 3 Rue Racine, Paris, 1903.)

It is difficult after reading this work to make a better choice of words in commending it than those used by Finsen in writing the preface; viz: "the subject is difficult, but it has been studied with much care, intelligence, and critical spirit, and I not only recommend most highly its perusal, but consider it necessary to all those working in photobiology and photothérapy. It is not only the most complete and best presentation of the subject but in the last chapter there is a counterbalance to the exaggerations, theories and fantastic applications which photothérapy has already given rise to, much to my regret." Without entering deeply into details the authors consider in the first part of the book the biologic rôle of light upon the elementary forms of life, upon bacteria, upon plants, upon lower animals, (here are described the very interesting experiments of the authors in showing the rapid growth in tadpoles kept under the influence of the violet rays as compared to those under the red), and finally the action of light upon the human organism. In the second part of the book are described and compared nearly all the different forms of lamps which have been devised since the original Finsen lamp.

After a very impartial consideration of the former methods of treating lupus vulgaris by the destructive method:—complete ablation, caustics, curetting, etc., and the sclerogenic method:—galvanocautery, and scarifications, the authors give

a *résumé* of results obtained by other workers in phototherapy and their own brilliant results at the Etablissement Dermatologique de Paris, where in forty-three cases of lupus vulgaris which had been considered as incurable by other methods thirty cases were cured in part or entirely by the Finsen light. In lupus erythematosus their results were 13 cured out of 23 cases and nearly all of these had been treated for various periods by other methods in the hands of competent dermatologists. The authors consider this method infinitely superior to all others in the treatment of lupus of Cazenave, in this sense that no case curable by other methods (outside of radiotherapy) would be incurable by phototherapy and that phototherapy will cure in the proportions given, cases absolutely rebellious to the old methods. They consider themselves justified in looking forward to much better statistics with an improvement on the present lamp, which is still far from perfect, although a number of improvements in the way of pointed and bent compressors for reaching inaccessible cavities have been added by the authors. In nævi, sycosis, acne rosacea, tuberculides, epithelioma, alopecia, etc., while their results were not so conspicuously beneficial, they were nevertheless very encouraging and never unfavorable.—A. D. M.

Photothérapie, La Lumière, Agent Biologique et Thérapeutique. By A. Chatin and M. Carle. (Masson et Cie, 120 Boul. St. Germain, Paris, 1903.)

With the present impetus given to physico-therapeutics, any manual which assists in a better understanding of the technique of phototherapy is welcome, and this the present monograph does in a direct and interesting manner. The competence of the authors to handle the subject is vouched for by so eminent an authority as D'Arsonval, who writes the preface. In view of the great popularity of physico-therapeutics, it must be a source of satisfaction to D'Arsonval to recall the fact that in 1877-8 he drew attention to the importance, from a biological point of view, of the study of the problems of superficial tension and osmosis, and that he then advanced this as not only an explanation of the phenomena of motion and nutrition in the cells, but also as producing electricity;—ideas which then received no response. With the same scientific clairvoyance, he suggests that electro-therapeutists should study the remarkable properties of "ionizing" water in the presence of certain metals, causing them to react as organic ferments. He states further that electricity is not the only agent which may produce these changes, but that a number of radiations emanating from Crookes tubes produce analogous effects and that light may produce the same modifications in the vitality of cells.—A. D. M.

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PALUDIDES;* WITH THE HISTO-PATHOLOGY OF A CASE OF MALARIAL PURPURA.

BY MARTIN F. ENGMAN, M.D., ST. LOUIS.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

After the suggestion of Verneuil and Merklen[1] and also of Brocq,[2] I have selected the term paludides to include a group of eruptions associated with malarial infection, and when so associated to express their apparent origin. It is, of course, generally understood that malaria is often the cause of various pathologic changes in the skin, yet definite knowledge on this subject is meager; many of the diagnoses and therefore much of the literature is founded upon the mere periodicity of the eruption, its cure by quinine or association with general symptoms of malaria, without the necessary demonstration of the plasmodium malariæ in the blood. Such data, though of empirical value, lacks the necessary proof. For several years it has been a routine procedure with me to examine the blood for the malarial organism in every case where any suspicion of that infection could be entertained, with, to me, some rather surprising and interesting results. These observations were published in detail in January, 1902.[3] Up to that time I had collected some 18 cases of various types of eruption, and at the present time can add 8 more; a limited number of cases, but as St. Louis is not situated in a particularly malarial district, a relatively large number from one observer, and only collected by careful clinical examination of every suspicious case; thus, leading the writer to believe that as an etiological factor in certain diseases of the skin malarial in-

* The term "Paludides" is not meant to imply that these diseases are only paludal in origin. Therefore it is not the intention of the writer to apply to it the significance indicated by the word tuberculide or syphilide.—M. F. E.

fection has not received the attention it deserves. Therefore my object in presenting this paper is to briefly call attention to this fact and to enumerate the dermatoses in association with which the plasmodium has been demonstrated; purposely avoiding any theoretical consideration of the subject.

Herpes Simplex is probably the most frequent eruption in this connection; according to Kelsch and Kleiner[4] it occurs in one-third of the cases, while Riesman[5] thinks it complicates about one-half of them. It usually appears upon the nose, lips, eye-lids, cheeks, and forehead. The herpetic lesions have, in my experience, been more severe, extensive and painful than those from any of the usual causes, which agrees with the experience of Stengel[6] and Riesman.

Herpes associated with marked general malarial symptoms is a familiar picture to every clinician, but it is to the non-febrile type I wish to call attention. Two of the most severe eruptions of this character I have ever seen occurred in repeated attacks, in conjunction with paludal infection without any of its usual general symptoms, except a slight malaise. There was apparently no rise of temperature or chill, while the tertian parasite was found in fair numbers in the blood.

Herpes Zoster.—Columbini[7] in 1893 was the first to speak of the apparent relationship between Zoster and malaria, followed by Winfield[8] in 1895 with further observations by him in 1902.[9] The latter reported 14 cases in all of Zoster in which the blood contained the plasmodium; the former one case of a universal Zoster of a severe type. To those 15 cases I can add 10 additional ones, one of the intercostal type in which examination of the blood revealed the plasmodium. In all of these cases except one, the pains usually accompanying an outbreak were much less than usual, the vesicles being smaller and less inflammatory. They also appeared to involute more rapidly than they ordinarily do, while the slighter pain and feeling of soreness promptly disappeared under anti-paludal treatment. In but two of these cases was there any general symptoms; one had slight chills with some fever and great pain along the course of the affected nerves. In the other there were the usual symptoms of chronic malarial poisoning of a mild form, with pain in the side of the chest for some days preceding the Zoster, which was diagnosed as pleurisy. A blister was applied and the Zoster vesicles when they appeared were thought to be due to the blister. These were followed by "Zosteroids" in a number of successive crops upon the left side of the back and chest, but not over the site of the preceding typical Zoster outbreak. The pain in this case was periodic in intensity, being quite severe in the evening. Like Win-

field, I believe paludism to be a frequent cause of Zoster; about half of my cases presenting that infection.

Pompholix has always appeared to me from its characteristics as a vaso-motor disturbance of toxic origin. This was strikingly confirmed by the study of four cases of pompholix in which all the classical symptoms existed (the cold, clammy, moist hands, clusters of deep vesicles, etc.), by the finding of the malarial organism in the blood of the patient and its subsequent complete and rapid cure under quinine. One of these cases had a typical Zoster[10] a week before the appearance of the pompholix. The skin of the legs also showed a peculiar trophic change, an exfoliation of the epidermis in furfuraceous scales, that came off in great abundance, the skin being harsh and dry with superficial fissuring without any signs of inflammation. Upon both hands and feet was a profuse eruption of vesicles, which, from their nature and distribution, would be classed under pompholix. The skin of the hands, however, in this case was hard and dry. The diagnosis of malaria was confirmed by Drs. Saunders and Carl Fisch. The patient promptly recovered of all symptoms under quinine without local treatment.

Urticaria is, according to Thayer[11] and also Christiani,[12] the most frequent eruption in malaria. Riesman[13] says it is possible to distinguish three types of urticaria in malaria:

1. That accompanying the malarial paroxysm and usually appearing during the febrile stage—the *febris intermittens urticata*—of older writers.

2. That replacing the chill, the other features of the paroxysm remaining.

3. That taking the place of not only the chill but of the entire paroxysm.

This latter class is the one most frequently seen by the dermatologist, the crops of wheals appearing at periodic intervals unaccompanied by the other features of the paroxysm or by only chilly sensations and slight rise of temperature. Often even the slight disturbance which produces the urticaria is preceded for several days by a mild periodic pruritus. In one of my cases the urticaria preceded the chill over nine days, the latter occurring at the first consultation. The eruption may occur upon any portion of the integument as in urticaria from other cases. It may be complicated by angio-neurotic œdema or the latter may exist without the urticaria. In one of my cases small papular lesions occurred upon the body while the face was at the same time disfigured by large swellings—giant wheals.

Malarial urticaria is usually periodic in its manifestations, but it

may occur at irregular intervals, especially after insufficient doses of quinine. In my experience there is nothing peculiar or characteristic about this form of urticaria, except its evanescence and periodicity. Two of my patients complained of a burning under the skin rather than pruritus. Quinine, we know, may cause an urticarial outbreak, yet none of my cases had had the drug previous to the attack, which was promptly relieved by it.

Erythema Multiforme.—An eruption which would undoubtedly be classed under this heading I have observed in those cases of paludism. One of them presented all the typical features, running the usual course of that disease, while two of them were of such an evanescent character and so pruritic that had it not been for their symmetry, general distribution, size, shape and polymorphic character of the lesions, they would have been termed urticaria. One of these cases was seen in consultation with Dr. H. Clay Creveling, of St. Louis, and was reported by him. When I saw the patient he was delirious, with a temperature of 105.4 degrees. Over the neck, chest, back and extremities the eruption was symmetrically scattered. The patient gave a history of a similar outbreak two days previously. Smears of the blood gave fields rich with the tertian parasite. The eruption appeared again upon the second day after this, but on the fourth day it was substituted by a moderate pruritus, the patient having in the mean time received inunctions of the oleate of quinine every four hours. The lesions on the skin remained quite prominent for about five hours, when they began to disappear with the general symptoms, leaving only the faintest trace in seven hours after their appearance.

The third case of polymorphic erythema was preceded for several days by a severe pruritus, and after its outbreak in two days succeeded by icterus of malarial origin.

Closely allied to these cases is the one reported by Albert Billet,[15] under the title of Intermittent Erythema Scarlatiniforme of Malarial Origin. Billet's case would have been taken for scarlatina had not its intermittent character been observed and the hæmatozoa found in the blood. Anthony[16] observed a similar case.

Thayer[17] has seen eruptions closely resembling measles associated with malaria.

Malarial infection is often complicated by kidney lesions and albuminuria with casts, which, when an eruption is present, may assist in forming an erroneous diagnosis of the skin lesions as well as of the general condition. Several of my cases have had a marked nephritis which also cleared up under antipaludal treatment.

Brocq's[18] famous case of nummular eczema of malarial origin, is somewhat similar to one of my own, with nummular eczematoid patches upon the face and neck and smaller ones arranged in groups upon the arms. These patches were slightly infiltrated and itched more or less constantly, but intensely so at night when there was a general pruritus and a rise of temperature of two to four degrees. Besides these lesions there were deep seated pompholix vesicles upon the sides of the fingers of both hands. This patient had a nephritis to which I attributed her weakened condition until an examination of the blood revealed the estivo-autumnal parasite. The eruption rapidly disappeared under quinine, the nephritis continuing some weeks longer.

Duhring[19] speaks of malaria as the cause of forms of eczema and eczematous dermatitis. He says in such cases the eczema is not so characteristic as from other causes; is subject to periodic congestive attacks and yields promptly to quinine and arsenic.

Purpuric eruptions of an acute character are certainly rare in malaria. Small petechiæ are, of course, occasionally observed. Hemorrhage into herpetic vesicles has been reported by Ornstein[20] and others. Ecchymotic lesions, according to Riesman, have been observed by Guelliot.[21] W. A. Hardaway[22] and also Bliss,[23] of St. Louis, record each a case of purpura hemorrhagica in which the plasmodium was found. Dr. Bliss' case had pain in the ankle and knee joints and a purpuric eruption over the arms and legs. Both cases answered the therapeutic test.

My experience is limited to two cases; one a girl of eight, who had purpuric spots, the largest about the size of a silver dime, located in irregular groups over the face, neck, arms and legs. She had had several recurrent crops before I saw her. The lesions were slightly raised, not itchy, and of a purplish-red color. They only partially disappeared upon pressure. The patient made a prompt recovery under quinine. The second case I owe to the courtesy of Dr. O. H. Jackson, who was then in charge of the medical ward at the City Hospital. The patient, a youth of 19, had been working in Arkansas. He was taken sick with a chill, headache and nausea, which was followed by fever and sweats. These symptoms were repeated on alternate days for six days when he was admitted to the hospital. The night before his admittance the eruption appeared on the face, hands and feet. He denied having taken any drug. This eruption consisted of slightly raised macules, the size of a dime and smaller, of a purplish-red color. They partially disappeared upon pressure, but gave the impression of a purpura. The lesions were thickly scattered

over the face, forehead, eye-lids, ears, neck, forearms, backs of hands, a few on the thighs and diffused over the legs and feet, also sparely upon the soles. Their arrangement in clusters of more or less crescentic outlines was striking. There was apparently no relation to any anatomical part of the skin, only two were perifollicular out of several hundred examined. They remained discrete although new lesions appeared with the next paroxysm.

Blood from the finger tip contained the tertian parasite. The course of the disease was that of a remittent type which responded readily to quinine and later quinine and arsenic; the eruption gradually fading with the improvement in the general condition and in eight days after his entrance into the hospital only slight pigmentation marked its site. It was probable, from the notes made by Dr. Jackson, that the eruption appeared during or shortly after the chill.

One of the lesions was excised from the arm without local anesthesia before quinine was administered. The piece was fixed and hardened in alcohol, cut in celloidin and stained with methylene blue-eosin and by various other methods.

The lesions were round, of a uniform purplish-red, slightly raised above the surface and about each of them was a unique white line, or ring, which stood out sharply between the lesion and the healthy skin. The examination of the microscopical sections was, remembering these clinical facts, rather surprising, as nothing very marked except œdema could be observed. The superficial vessels and capillary loops were dilated while a few were visibly narrowed by the swelling of the collagenous tissue about them, but all of them had an increase of perithelial cells, consisting largely of lymphocytes, connective tissue cells and mast cells. These latter cells were of large size and of unusual length; they were rather more numerous than usually seen in such conditions. They were situated about and in the walls of all the capillaries and vessels and were scattered more sparsely throughout the cutis. The lymph spaces were widely dilated, the deeper ones forming large spaces in the sections. Along the epidermic margin, by darkening the field, the little superficial network of lymph channels could be seen widely gaping and extending up for some distance into the epidermis. About the capillary vessels the lymph spaces were also markedly dilated.

There was some proliferation of the endothelia of the vessels, and the cells of the walls looked in some places œdematous. All the superficial vessels were empty, except a few which contained quite a number of leucocytes, while the deeper ones were engorged with red blood cells;

but at no place were there any signs of embolic formation. Here and there could be seen evidence of a probable diapedesis of red blood cells from these deeper vessels, possibly just sufficient to cause the persistence of the color of the lesion under pressure, which was also no doubt due to this deep engorgement from the superficial œdema. From the size of the lymph spaces no doubt the output of serum was readily taken up, thus limiting the clinical signs of œdema.

The sweat coils and ducts were generally dilated and in some places showed degenerative changes and œdema. There was an increase of cells about the coils, in their connective tissue and about their vessels, while many of the latter in this locality were filled with blood.

No leucocytosis or sign of infectious inflammation was evidenced anywhere in the sections; only the symptoms of a mild irritation. The epidermis presented the changes usually seen in a mild œdema in the cutis. The elastic tissue was unchanged. No vessel plugs consisting of red blood cells and parasites were found as have been demonstrated by Ewing[24] in the kidney, Spencer[25] in the brain, and Basseres[26] in the retina, which, however, could not be expected in the tertian type of the parasite, as the authors mentioned all had to do with the estivo-autumnal parasite, where the large extra cellular bodies may cause thrombi. The changes in the sections appeared to one as having been produced by a toxic vascular neurosis, probably of central origin; especially so when the symmetry of the lesions is also remembered.

Ulcers and gangrene of the skin associated with malaria, particularly with the estivo-autumnal type have been reported by Sensini and Vignolo-Lutati,[27] Cross,[28] Osler,[29] Munro,[30] McElroy,[31] and myself.[32]

REFERENCES.

[1] Verneuil and Merklen: *Ann. de Derm. et de Syph.*, 1882, p. 625.

[2] Brocq: *Ann. de Derm. et de Syph.*, 1896, p. 1.

[3] Engman: *Med. Bulletin Washington University*, Vol. I., No. 1, 1902.

[4] Kelsch and Kiener: *Quoted by Riesman; vide infra*, p. 464.

[5] Riesman: *American Medicine*, Mch. 22, 1902.

[6] Stengel: *Quoted by Reisman, loc. cit.*, p. 465.

[7] Columbini: *Commentario Clinico e Mal. Cutane e. G. U.*, Jan., 1893.

[8] Winfield: *N. Y. Med. Jour.*, Apr. 6, 1895.

[9] Winfield: *Ibid.*, Aug. 2, 1902.

[10] Engman: *St. Louis Med. Review*, Nov. 11, 1899.

[11] Thayer: *Lectures on Malarial Fevers*, 1897.

[12] Christiani: *Ann. de Derm. et de Syph.*, 1896, vii., I.

[13] Riesman: *In loc. cit.*

[14] Creveling: *Med. Bulletin, Washington University*, Vol. I., No. 1, 1902.

[15] Billet: *Bull. et Memóires de la Société Méd. des Hôp. de Paris*, Apr. 11, 1902.

[16] Anthony: *La Progress Médical*, Apr. 26, 1902.

[17] Thayer: *In loc. cit.*

[18] Brocq: *In loc. cit.*

[19] Duhring: *Cutaneous Med.* Part. ii.

[20] Ornstein: *Revue de therapeut. medico-chirurig.*, 1861, 8; quoted by Riesman, *loc. cit.*

[21] Guelliot: *Gaz. Méd. de Paris*, 1883, p. 41.

[22] Hardaway: *Manual of Skin Dis.*, 1898, p. 240.

[23] Bliss: *St. Louis Courier of Med.*, 1900.

[24] Ewing: *Amer. Jour. Med. Sciences*, Oct., 1901.

[25] Spiller: *Jour. Nervous and Mental Dis.*, 1900, p. 643.

[26] Basseres; *Arch. d'Opthal.*, July, 1896.

[27] Senseni et Vignolo-Lutati: *Giorn. ital. d. mal. ven. e delle pelle*, 1900, fasc. 6, p. 707. Abstract *Ann. de Derm. et de Syph.*, Oct., 1901, p. 899.

[28] Cross: *Jour. Tropical Med.*, 1900.

[29] Osler: *Bull. Johns Hopkins Hosp.*, Feb., 1900, p. 41.

[30] Munro: *Monograph*, p. 96.

[31] McElroy: *Jour. Amer. Med. Ass.*, Sept. 14, 1901.

[32] Engman: *In loc. cit.*

DISCUSSION.

Dr. James C. White said that he could not refrain from alluding for a moment to a matter of historical interest in the annals of this association. One of the first papers we heard after our organization was by a gentleman from Kentucky on the relation of malaria to the etiology of skin diseases. The writer held the opinion that malaria was the cause of eczema in nearly every instance, and in the discussion that followed the reading of the paper, when the members from New England called attention to the fact that although eczema was extremely common in their section of the country malaria was not, and that the eczema presented practically the same type and course as it did in malarial districts, the gentleman from Kentucky waved that aside with the statement that it did not have the slightest bearing upon his conclusions, because our cases of eczema must have been caused by malaria, and al-

though we did not recognize the presence of the latter factor, its existence was proved by the prevalence of the eczema.

Dr. Pusey was glad Dr. White called attention to Dr. Yandell's paper. It was an illustration of the fact that although we were then groping in the dark, we sometimes arrived at conclusions more or less accurate. His admiration for Dr. Yandell's malarial theory as the origin of a great many skin diseases was somewhat tempered by the fact that he attributed all other skin diseases either to syphilis or something else. Still, in the light of what we now knew regarding the malarial origin of skin diseases, the old theory of Dr. Yandell was of interest, and it showed that sometimes, by a large collection of clinical facts, we might reach very accurate conclusions.

Dr. Gilchrist was extremely interested in Dr. Engman's excellent paper, and particularly in the fact that he found no malarial organisms in the vesicles of herpes. They had been found there, and one would be inclined to believe that these organisms were the cause of the herpetic and pompholyx lesions accompanying malaria.

Another interesting thought in connection with the paper was the multiform causes of the same kind of skin lesions. For example, in erythema multiforme and herpes zoster we had different causes producing similar lesions. Erythema multiforme was probably produced by more different factors than any other disease of the skin.

The President, Dr. Bowen wished to say a word regarding the term "paludides." It did not strike him as an especially fitting one. While malaria was the cause of the eruption in these cases, the eruption was also produced by other causes, and he thought the term would be apt to prove confusing. For example, we knew that herpes simplex and zoster were often associated with malaria, but also with pneumonia and cerebro-spinal meningitis, so that there was nothing characteristic of malaria in these phenomena, which would warrant a specific name.

Dr. Engman (closing the discussion) said that this name was taken merely for the sake of brevity. He did not think it was a good one, because it did not express what the terms tuberculide or syphilide did in connection with the class of eruptions to which they were applied.

It was very probable that the eruptions referred to in his paper, which occurred in various infections, were due to some toxic influence upon the central nervous system.

In reply to Dr. Gilchrist, would say that we would not expect to find the malarial parasites in the vesicles of herpes. They could not be found in any of the secretions from the vesicles, but as they occurred in the general circulation when blood was drawn from such a lesion the findings in that case would be useless. One would not expect to find the organism in the lesions, except in the blood vessels in the red cells or as thrombi, which had only been found in the brain and kidneys in the estivo-autumnal type.

MULTIPLE ANGIOMATA.

By Abner Post, M.D., Boston.

Instructor in Syphilis in Harvard University.

Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE patient is an undersized but healthy girl of 16 years, who bears upon her right arm a series of curious outgrowths or tumors which practically occupy the whole of the palm and extend in scattered nodules to the sternum.

In August, 1897, when she was 10 years old, she was admitted to the Massachusetts General Hospital, and at that time the following history was secured: "Was first noticed at about the end of first year as swelling under the arm. This gradually became more pronounced, and took a bluish hue with an irregular, lumpy outline. A 'short time' later, a puffiness of the hand was noticed, which also underwent the same change as did various spots along the arm. For the last six or seven years, has had spots on the chest in a similar way. First small and then gradually increasing in size. For the last year the spots have been gradually increasing more rapidly, and the mass on the hand particularly so. Physical examination negative. Description of lesions:

In axilla and down inner side of arm for about two inches is an irregular mass, the base of which is soft, covered with skin and normal in color. The summits of the irregularities are bluish and have a soft, velvety feel. There are several spots scattered over the front of the shoulder and a few on the chest near the sternum, about at the level of the fourth rib. The elevations also occur down the inner side of the arm along the course of the superficial veins. The hypothenar prominence presents a large mass, which extends down the ulnar side of the little finger and is much more pronounced in color. The tips of all the other fingers are also affected. About midway down the arm on the ulnar side is one mass about an inch long, which is devoid of abnormal color and feels much harder than the rest. All the various places can be made to become smaller under pressure. They seem to be superficial and most freely movable. No induration felt. There has been no bleeding from them except when injured. No pain.

"August 27.—Prepared for operation.

"August 28.—Operation. Dr. J. W. Elliot. Ether. The superficial elevations were some of them cut away with a knife. Some

snipped off with scissors and proved to be superficial, dilated veins. The mass in the axilla was dissected out. There seemed to be but one or two large radicals supplying the various circumscribed bunches, which, after being tied, shut off most of the blood supply, thereby leaving but a small amount of ooze. The induration around the one in the arm proved to be simple inflammatory tissue. The mass on the hand was not entirely removed, only the greater portion. The main blood supply was tied off and most of the smaller masses incised, with the idea of destroying the rest of the blood supply. The masses on the tips of the fingers were dissected off. Everything was sewn up tight with silk-worm gut to prevent the considerable ooze. The arm was bandaged tightly and swathed to the side. Good recovery from ether.

"Excision of dilated veins of the arm and chest and hand. Incision of remaining points of dilation.

"September 4.—The dilatations which were operated upon have not recurred, but there seems to be a dilatation in other veins of the arm.

"On September 20th and 25th, it was noted that the remaining veins seemed to be gradually increasing in size.

"There are several bright-red bunches along the hypothenar prominence which are very similar to those removed and which have increased considerably during the last few days.

"September 28.—There has been no marked change in the condition. The girl has good use of the hand, but the veins seem to be dilating along the areas where the primary trouble was.

"October 5.—All prominent collections of veins were touched with actual cautery. No bleeding."

She was first seen at the Boston City Hospital, when a series of photographs were taken.

The growths had recurred to such an extent that the description already given is practically true of the condition then seen. The scars of the operations of six years ago are still visible. The right forearm is larger and slightly longer than the left. The right hand is nearly double the size of the left. This increase is due to a mass of tumors which occupy all surfaces of the fingers and the palm extending up the wrist on the ulnar side. The palm, with the exception of the thenar eminence, is filled with a nodulated mass. On the arm itself are many isolated tumors of varied sizes projecting half an inch above the surface. In the axilla are several tumors, quite close together, but nowhere any such mass as in the palm. Over the sternum

and just above the breast were two small tumors, but there was none on the rest of the body. In addition, the arm and especially the forearm showed numerous sub-cutaneous swellings due to enlarged veins. These tumors vary in color from bluish to reddish purple, the skin covering them adherent and looking as though it was ready to break in many places. To the touch many of them are quite resistant, some of them somewhat elastic, but pressure made little effect upon their shape. Judging by touch alone, they seem more like fibromata than simple angiomata.

The radiograph shows the bones unaffected by morbid growth, but an increased opacity in several of the morbid growths so that their outlines are well defined, but the plates show a series of small opacities nearly as dark as the bones themselves, which represent hardened bodies, perhaps phleboliths.

Several of these tumors have been excised, some simply for examination, several because they threatened to break through. The bleeding was free, but easily controlled, and was venous rather than arterial, though one small artery was cut and spurted. The whole arm seemed one network of enlarged veins underlying these projecting masses.

The histological examination by Dr. F. B. Mallory shows "that they are hæmangiomata. For the most part the vessels are large with thin walls, and would be classed as cavernous. In places, however, the vessels are small and approach more or less closely the capillary type. In almost all of the vessels, but especially in the smaller ones, the lining endothelium is more prominent than in normal blood vessels.

"The amount of connective tissue in the walls of the blood vessels is slight. In places it is œdematous, and sometimes it contains numerous mast cells. In places the vessels approach very close to the epidermis.

"Some of the cavernous vessels are more or less filled with old thrombi infiltrated with a few cells, chiefly polynuclear leucocytes. It is probable that the calcified nodules seen in the X-ray photographs are due to the deposition of lime salts in such old thrombi.

"The increase in the size of the tumor nodules seems to be due chiefly to dilatation of the small new-formed capillary vessels."

In *Die Elephantiastichen Formen* of Esmarch und Kulenkampff is an account of a 3½-year-old girl who was the subject of a similar misfortune. She is described as having at birth an enlarged and nodular swelling of the right arm, which had slowly increased in size. The tumors were less numerous and larger than in the present case.

PLATE XLIV.—To Illustrate Dr. Abner Post's Article.



These tumors were of three different varieties; the whole extremity was 2½ cms. longer than the healthy, and examination, after excision, showed two of them made up of blood vessels, supposedly veins, while in their immediate vicinity were many vessels of the size of a crow quill, which contained clear lymph. A third tumor was described as a simple lipomatous angioma.

DISCUSSION.

Dr. James C. White: This patient was presented by Dr. Post to the Boston Dermatological Club, and it was a very striking, unique case. The element of color was wholly lacking in the cast that he had shown here; otherwise, it gave an excellent idea of the appearance of the hand. In palpating these tumors, it was difficult to believe that they were purely angiomatous in character; it seemed that there must be a fibrous element connected with them. On attempting to compress the lesions, they gave about the same feeling of resistance that one would get on attempting to compress the protuberances on this plaster cast. The microscopical report failed to convey a proper idea of the process that apparently existed; it failed to account for the firm elements associated with the angiomatous tissue. Still, if calcareous changes were present, that might explain the firm consistency of the lesions.

Dr. Gilchrist: After looking at the sections under the microscope, they seemed to show a purely angiomatous condition, with a very small admixture of fibrous tissue. The lymphatics and blood vessels were distinctly dilated.

Dr. Post: Just one word in regard to the removal of these tumors. After palpating these growths, it was scarcely possible to believe, as Dr. White had already said, that they were simply dilated blood vessels, but upon extirpating them, it was easier to understand the peculiar sensation they gave to the touch. The growths might be compared to hernial protrusions of the veins, involving only a part of the vessel wall.

One very curious feature in connection with the case was the exact reproduction of the original tumors after their removal, so that a description of the case given six years ago was practically the same as that given to-day. The growths recurred upon practically the same sites which they occupied before their removal.

The President, Dr. Bowen: Was there any fault found in the circulation? Any lesion of the heart?

Dr. Post: The heart and other organs were said to be normal six years ago. They were normal at the present time.

A CASE OF CREEPING ERUPTION (LEE), LARVA MIGRANS (CROCKER), HYPONOMODERMA (KAPOSI).

By Henry W. Stelwagon, M.D., Philadelphia.

Read before the Section of Cutaneous Medicine and Surgery of the American Medical Association, New Orleans, May 7, 1903.

EXAMPLES of this rather extraordinary affection described under the various names above mentioned are sufficiently rare to warrant the publication of additional cases, even though it add but little more to our present knowledge than to call attention to its existence, and to its peculiar clinical phases. The case came under my observation last October, and is detailed in the following brief notes. The patient, a boy aged nine years, in good health, presented active manifestations of the disease on the lower part of the leg and evidences of recently spent eruption on the lumbar and sacral regions. The eruption on the leg consisted of a somewhat irregular, tortuous erythematous, erythemato-papular and papulo-vesicular line of some inches in length, and varying from a sixteenth to an eighth of an inch in width and of about the same varying elevation above the surface. The line was the least marked, and indeed scarcely perceptible, at the extending end; more marked on the recently traversed part, and gradually becoming less noticeable and fading away where the track had first been made. When the part was closely inspected the spreading portion could be seen as a thin thread-like hyperæmic line with practically no elevation at the extreme point. As the line progressed the older part of the eruption, which had developed several hours, perhaps a day or two before, became more elevated, forming an erythematous ridge, which further along developed into a thin, more or less papular line, with here and there in its course slight papulo-vesicular projections. The still older part of the ridge had become distinctly papulo-vesicular and even vesicular. It was practically solid and continuous, except that in places the elevation was greater than at others, giving it in some portions of its length a slight ill-defined chain-like aspect. Further back from the portions just described, in the still older eruption, the line consisted of a thin, narrow, uneven crust, or crusty scale, with a trifling hyperæmic border. On the yet older, or first part of the track, the skin had flattened down to its normal level, and was marked by slight hyperæmia and pigmentation, which became less and less conspicuous as

the very beginning site of the eruption was approached. The extent traversed on this region from day to day varied, so the father stated, considerably, from a fractional part of an inch to an inch or more. There was here at times considerable itching, and this leading to scratching during sleep had given rise to a few small impetiginous lesions.

On the back, where the disease had already abated when the case came under my care, could be seen irregularly tortuous pigmented lines or narrow bands extending from the center of the back around on to the left side, and then in an exceedingly tortuous and erratic manner down to the middle point of the sacrum. It was in this region that the disease had first presented, starting several weeks before the case came under my observation, starting at the middle of the back and steadily progressing from a part of an inch to several inches daily, with periods of comparative quiescence. When the line had reached a point over the sacrum its further progress was stayed and the disease in this region was controlled. Before success had crowned the therapeutic attempts in this region, however, the leg had also become the seat of a similar manifestation. The back eruption, the father stated to me, was wholly due to the migrations of but one line, or parasite, the daily progress being, as a rule, much more rapid than that observed with the leg eruption. When I first saw the patient the back was, as already stated, wholly free from active disease, pigmentation alone marking the course which the larva had taken, and this discoloration was becoming gradually less marked. The largest and most pronounced marks of pigmentation shown here were doubtless due to the applications of the remedy employed.

The case, as thus described, is practically a duplicate of the others that have been reported by Lee, Crocker, Neumann, Sokolow, Samson-Himmelstjerna, Kumberg, Kaposi, and Van Harlingen, with, however, probably more decided exudation. So far, while all observers must admit the evident parasitic nature of the malady, Sokolow, Samson-Himmelstjerna and Kumberg are the only ones who claim to have seen the parasite. It consists, according to their description, of an exceeding minute larva, from one-half to one and a half mm. in length, is spindle-shaped, and segmented, showing ten segmental divisions. It has a mouth surrounded by hooklets, and is armed with two suckers. It is further stated that eggs have been found attached to the hairs in the neighborhood of the line, which are believed to have been laid by some sort of fly, the parasite found in the skin being its larval form.

According to Samson-Himmelstjerna the parasite may be more readily found by pressing a piece of glass upon the suspected position, just beyond the advancing end of the eruption, and inspecting through a lens, the larva being seen as a minute black dot or point. Others, including myself, have, however, not been so successful. In fact in my case what, to the naked eye, seemed to be the extreme extending point was not in reality such at all, as with a magnifying lens the burrow could be seen to extend almost an inch beyond this, being traceable as a minute, thread-like scarcely recognizable line. In a few of the reported cases, including the one under my observation, the disease first appeared while the subject was at the seashore, or shortly after a visit to that region. The malady is rare, although according to the Russian observers named it is not so rare in South-east Russia.

The cases all get well, some spontaneously, others apparently as the result of local applications having in view the destruction of the migrating larva. The malady may, however, run a variable course as regards duration from several weeks to some months; in the case observed by Crocker the parasite "was on the march for two and a quarter years." It is not at all improbable that in some instances where cure occurred while under treatment that the result was spontaneous rather than the effect of the application employed. The attempt has usually been made to destroy the larva at the point that appeared to be the extreme extending line or just ahead of this, but unless a magnifying glass be used, judging from the study of my case, the larva would be much beyond this. The treatment I adopted consisted in the cataphoretic application to the suspected place of a corrosive sublimate solution, the application covering an area of an inch and a half in diameter; and supplementing this by a minute application of nitric acid to the spot where the larva was thought to be. Bearing also in mind that one of Van Harlingen's cases got well under the administration of asafœtida, this was also given. Whether as the result of this treatment, or spontaneously, the malady immediately ceased to continue.

While gratified at the promptness of the result, the polytherapeutic method employed left me, unfortunately, in doubt as to the effective agent. On the back, Dr. Marvel, of Atlantic City, under whose care the case had previously been, succeeded after a number of attempts, in stopping the disease with applications of acetic acid; but he was not successful with this remedy in staying the disease on the leg.

PLATE XLV.—(Fig. 1.) To Illustrate Dr. Henry W. Stelwagon's Article.
(Fig. 2.) To Illustrate Trans-Pacific Correspondence.



Fig. 1.



Fig. 2.

CORRESPONDENCE.

"Trans-Pacific Chat."*

AGANA, Guam, Ladrone Islands, April 5th, 1902.

Dear M——n.

I have treated your last letter shamefully; but, as the old nigger told his master when he returned from a tour of observation (under orders) of the damage done by a storm, "*the onliest consolation I has to offer is that it 'pears to be very gineral.*"

I was broken out of my ship in Manila with only scant notice; and since coming here on a Navy transport now two months ago, I have not felt much like resuming work. The island itself is not altogether bad, which should, however, only be taken to mean that it is not so bad as some of our other one-eyed "colonies" (God save the mark!).

With any reasonable facilities, one could spend useful time here in many directions, I have no sort of doubt. A French naturalist—M. March—has discovered and catalogued an indigenous bird of the ostrich type, apparently; and an officer of the Spanish Forestry Department in a short stay was able to identify 23 varieties of snails. So, in the two months I have been here I have proved the existence of Malta fever (by the Widal reaction only, for the cases were very mild); of the *ankylostomum duodenale*, which frequently appears to do very little harm; of yaws; and I strongly suspect the presence of a formidable blastomycetic trouble which has removed the organs (so to say) of expression from about 2 per cent of the native population. Heretofore, everyone has not hesitated to call this affection syphilis; but I am willing to leave it to you if the accounts of it in the inclosed portion of a report on the subject are not too optimistic by half. My man Friday—a Filipino and a faithful soul that earns a Mohammedan's heavenly reward weekly for about $10 Mexican currency—has seen but two recoveries in a year of careful observation; and I have no doubt but that spontaneous cure results often enough to account for them. Even if they were hereditary syphilis, of the existence of which I have only one positive observation, they would be almost entirely intractable to the usual antiluetics, especially as ineffectively used as they nearly necessarily are amongst savages—from which the natives are but a few lines removed, except that they lack the savage virtues of courage and independence. You will be asking yourself at once why I have not followed the plan I fell so into the habit of

* These two letters were received a number of months ago but for special reasons permission to publish them was only recently granted by the writer.

under Sabouraud of taking specimens for study from every interesting case without waiting for its fortunate possessor to die. . . . Well, I have done that in a way. But the alcohol in which I fixed—or tried to fix—my first tags of skin was "rotten"; imbedding material had to be extemporized and was not satisfactory; and, altogether, the result was something that even my positiveness makes me unwilling to dogmatize about. Wait until you have tried to extemporize a pathological outfit from a badly provided dispensary only intended for treatment, and then you will know some of the things I have had to overcome. Cultures do especially well here, if one does not mind what one says. Petri dishes assure contaminations; gelatin will not "jell"; and so to the end of the lesson. I have lost my Malta fever cultures that I begged from the supercilious army in Manila on account of the absence of peptone. But the thing that will interest you the most, I fancy, about this place is the presence of leprosy in the proportion of at least ½ per cent. of the population, which is almost 10,000. Strangely enough my predecessors seemed anxious to believe that it was decreasing of its own accord; but I cannot understand how they could spend the time here that they did and retain the notion. I have obtained proper authority and a lazarette is now being rushed with all convenient speed. I expect to start it with about 30 inmates that are about equally anæsthetic and tubercular cases. The Spaniards practiced isolation in an imperfect way; but we burned their leper hospital to make way for barracks for the Filipino political prisoners that are here to the number of about 30. . . . The so-called syphilitic cases need separate isolation quite as badly as the lepers, and indeed, the Spaniards accorded it them. The trouble seems to begin in the soft palate and inside the nostrils, but occasionally it appears to start behind and below the ears. Frequently the limbs show extensive ulceration of a somewhat superficial type, but true gummata have been uniformly absent, save in the case mentioned. It does not seem to be mortal in tendency; for the subject of the inclosed very "bum" photograph had it for 30 years and recovered fully. His mouth is perhaps 2 centimeters in diameter; his nostrils are replaced by an aperture of one-fourth that size; and his eyes have been entirely destroyed and are smoothly filled over with scar tissue. There are many other cases that will reach his state in time. Doubtless there are a good many that could be helped by operation; but I hesitate to undertake it because I have a lot of subordinates and assistants who are entirely without enterprise, and partly

because a few successes would make a man's life unendurable from the demand that would be made upon his charity. I can imagine nothing more ghastly than a face without nose, lips, or eyelids, and with great damage to the palate. The Spanish name is descriptive and brutally comprehensive. They call them "gangosos," i. e. snufflers. I hope next year to have a civil hospital with sisters of charity for nurses. Then, possibly, I can do something worth while; but, at present, it is beyond the capabilities even of my bitter tongue to make white men attentive to afflicted beings of (what must be considered) an inferior race. In other words, the "dam nigger" idea will not down. Really, that is the great rub, because it is confessedly the principal object of the present Governor, whom I like almost as much as any officer with whom I have served in our present relations, to avert from these natives the fate of the North American Indians. Which looks to me like blocking the wheels of progress; or, as an old sailorman expressed it, "pulling hard against my own common sense and God Almighty."

This should be about the worst of the sickly season; but, so far, I have not had much to do. I have succeeded to my satisfaction in checking a few cases of amoebic dysentery with ipecac and sulphur, which last I boast of having done something to introduce. It must be given liberally—2 to 4 drams daily—to be of use, and the earlier the better . . . etc.

Always yours most cordially,

M. D.

Manila, P. I., Jan. 4th, 1903.

Dear M——n.

I hope that you will believe that I sincerely regret my inability to send you anything worth your time for The Journal of Cutaneous Diseases, to which every success! The facts are that we almost never see anything not too commonplace to mention. There have been some terrible cases of pemphigus that would have only curious interest after all; and even they were not seen in time to photograph them at an interesting stage. All of them were complicated with kidney disease, and they usually died rather quickly. I have watched a few cases that I had thought might be coccidial in origin, but all of them are recovering under specific and surgical measures. Repeated examinations failed to show anything unusual in the pus from the numerous subcutaneous abscesses, and I wasn't able to secure a biopsy at an

early stage of development. I inclose you some scrapings from a fairly severe case of "dhobie itch."* Everyone has it here at one time or another. But its management with a saturated solution of salicylic acid in dilute alcohol is the simplest thing there is; and the laity has caught on to the remedy. (I think that I may fairly claim to have introduced it for this class of cases. In 1889, I induced a blond German messmate to give me a patch of his skin that was disfigured with pityriasis versicolor; and, upon observing its comparative superficial situation I scrubbed him with ether and used the acid solution mentioned as the most rational thing I could think of. I never published this small tip.) The fungus of this "dhobie"—*id est* "washerman's-itch" is probably widely distributed out here; the worst cases seem to come from being wet with dew or with the water off underbrush or that of swamps. White men *never escape* infection when exposed to these conditions; and the old vigorous treatment with iodine, etc., has produced much disability.

It will be hard to obtain specimens of "Caraté" or of the other skin troubles of importance, I fancy, for the reason that the natives are setting up for themselves with a vengeance. Every former native attendant is now a full-fledged *medico* (whereas they would lately have been flattered to death at being thought a *practicante*, or apothecary); and it is just such ignorance as this that will effectually prevent, for a long time, any efforts to learn the true nature of their afflictions. Then, too, the natives inspire feelings of utter loathing in most Americans, who end by looking at them only when it cannot be avoided. On their part, they are quite as independent and opinionated as we are. Hence, I cannot forecast the source of the very desirable compromise. They are unattractive in almost every possible way, judging from our standpoint. There is no real organization amongst them for any purpose whatever, although the Church and their native secret societies partly fill that bill. Smallpox is always on tap, and does not seem to be much dreaded by them; and there are many other disfigurements to their none too pleasing complexions. I shall try to bring you a Verascope negative of a "squirrel-hunting" party, which is a public function with even middle-class women. In brutal plainness, they catch one another's lice (*P. capitis*) in public. I have never tried to see how they dispose of them.

* The scales sent were examined in caustic potash solution and stained with Sahli's methylene blue. The fungus was very abundant and resembled the interlaced network of trichophytosis of the genito-crural region. I was unable to obtain a pure culture.—A. D. M.

The Civil authorities have not seemed to have accomplished much; and, in my opinion, ——— is about the only one that is doing any real work to my knowledge. The environment seems too much for many of the very bright youngsters who brought lots of scientific afflatus with them. It seems quite a shame that beri-beri is still untouched practically; and anyone who knows cannot enthuse much over the arrangements progressing for setting up the enormous leper colony that is required here. It is actually intended not only to prevent the lepers from marrying, but to keep the sexes separate. It is not known what will be done with those already married. The man given out as superintendent is known to have demonstrated a lumbricoid worm as "filaria sanguinis hominis," etc. If the leper-catchers don't have an entertaining time of it, I am no inspector of grindstones. "My" leper station in Guam started with 25 inmates and "guarantees" against mistakes in diagnosis: I suppose they will call any such that may occur hereafter cures, which seem undoubtedly to occur spontaneously. The Governor was almost disingenuous about his explanation as to why it had only been inaugurated after three years of occupation. The real fact is that we chose to disregard its presence. Hence a pest-house that the Spaniards had long maintained was burned to make room for barracks for political prisoners, and many wretched patients were thrown immediately upon the charity of the islanders, certain of them not being lepers at all, so I thought. But the worst part of it all is that a zealous youngster had rousted out a score of cases at least and reported them to the proper authorities; and, in spite of the presence of a copy of his report on file in Guam, no inspection of the persons that he referred to had been made. Worse than that, certain essential records kept by the Spaniards had become lost or mislaid.

Did I ever tell you of the "American" spirit? "*We're all right—or, if we aren't, we don't want to hear about it!*" That is just it. . . .

Cordially yours, M. D.

NEW YORK DERMATOLOGICAL SOCIETY.

317th Regular Meeting, September 22, 1903.

C. T. Dade, M.D., President, in the Chair.

Lupus Erythematosus. Presented by Dr. Winfield.

Miss G. M., aged 47, native of Scotland. Nearly 20 years ago she noticed an eruption on the face, the true nature of which was not recognized until about 10 years ago, when she consulted a physician in New York.

The diagnosis of *lupus erythematosus* was made and the usual remedies applied. She consulted me last October, at which time there was upon the cheek an erythematous and ulcerated spot about 7 inches in circumference, also a number of small spots scattered over the nose, forehead and cheek. After being under my care for six weeks she made a visit to Scotland. I gave her a letter to Mr. McCall Anderson, who treated her for about six weeks. Before she went abroad she had heard of the Finsen light cure and when she learned that there was a place in Glasgow where she could receive that treatment, and as she was not deriving any benefit from Dr. Anderson's treatment, she obtained his permission to try the Finsen method. She accordingly placed herself under the care of Dr. MacIntosh, of the Glasgow infirmary, who gave her the light treatment every day for six months, the sittings averaging about twenty minutes each. At the end of June, she being very anxious to come home, Dr. MacIntosh consented to let her come and assured her that she was cured. While the cutaneous condition is greatly benefited I am a little uncertain that an absolute cure has been wrought, this is the reason I present her this evening, also to show how a case of lupus erythematosus appears after treatment by the Finsen method.

Dr. Klotz considered the case much improved, but did not think it should be called cured.

Dr. Sherwell thought the result hardly justified the extensive treatment. Raclage would have been equally efficient.

Dr. Allen thought that allowance must be made for the fact that some cases of lupus erythematosus would get well under any treatment while other cases would behave badly under the same conditions. He did not consider this case as cured. Where the disease was limited to a single patch he thought curettage was better, in point of time required, than Finsen or X-rays.

Dr. Bulkley said that he had been using the high tension spark in the treatment of lupus erythematosus, using in some cases glass electrodes in others carbon. He thought the carbon electrodes gave better results.

Dr. Robinson did not regard the case as cured. From his experience he considered the X-ray as extremely unsatisfactory in the treat-

ment of lupus erythematosus. He would like Dr. Allen to tell upon what grounds he based his favorable opinion of curettage—in how many cases he had used that method.

Dr. Allen replied that he could not give the exact number of times he had employed the method, but that in three of four patches in the same patient, curettage alone sufficed to bring about a cure. He often employed the local application of aromatic sulphuric acid with the curettage, applying a mercurial plaster afterwards. He emphasized his method of boring or scraping underneath the edges. This seems to limit the spread of the patch.

Dr. Fox stated that all were doubtless familiar with cases of lupus erythematosus which disappeared spontaneously. He knew of no method that could be highly recommended unless it was the actual cautery. In many cases he thought lotio alba offered as soothing and beneficial an application as anything.

Dr. Winfield (closing the discussion): Although the case was much improved upon her return to America last June, in fact, might have been considered as cured at that time, at present it has returned and is too inflamed and angry-looking to be considered as cured.

Case of Mycosis Fungoides. Presented by Dr. Fox for Dr. Bulkley.

The patient is a woman aged 57 years, a native of America. From the notes on the case furnished by Dr. Lyle, the patient had no skin disease prior to one year ago, when a slight erythematous spot appeared on the right cheek which spread slowly for five months, then took on a rapid development and became generalized. At present the lesions consist of erythematous patches which are very large, but are not confluent. On the body there are elevated, circular, erythematous and pityriasic patches. There is considerable infiltration of the dermis and some itching. The color varies from a purplish to a brownish hue. After about a month's treatment at the New York Skin and Cancer Hospital some of the erythematous patches disappeared, but a number of rounded circumscribed tumors about the size of a dollar appeared, scattered over the body. Some of these tumors have an erythematous surrounding ring giving the "Bull's eye" appearance. Fowler's solution was given in fifteen drop doses daily and increased until œdema of the lower extremities and albumin appeared in the urine. After about two weeks' use of Fowler's solution the patient developed a hyperpyrexia and marked cutaneous reaction, i. e.—redness and irritability. The treatment was discontinued and all unpleasant symptoms disappeared without the skin lesions showing any improvement.

A Case of Leukoplakia. Presented by Dr. A. D. Mewborn.

The patient is a motorman, 38 years of age, born in Ireland. Aside from recurrent attacks of malaria about six years ago, he has always

been in the best of health. He denies any venereal history, in fact, states that he never had sexual connection until married, which occurred eleven years ago. His wife has given birth to five children, all of whom are well. She has miscarried once at the fourth month. The patient applied for treatment on account of an urticarial rash on the left arm and forearm. Upon examining the mouth this white, shiny, nacreous, patch on the center of the tongue near the tip was found—the patient had never noticed its existence. The patch, which is about two centimeters in diameter, has well-marked subjacent induration and gives, with the three or four adjacent pin-head sized patches, the sensation of a "rasp." The patient has been a heavy pipe smoker for fifteen years, consuming about eight ounces of cheap tobacco a week. He admits that the mouthpiece of his pipe comes in contact with the part of his tongue where the lesions occur.

Dr. ALLEN had seen a great many cases of leukoplakia and considered it rare to find a case in which syphilis could be excluded. He believed that some cases were much benefited if not cured by the X-ray. Ulcerations or fissures in the patches he treated with a chromic acid solution. Some were benefited by the curette and electrolysis.

Dr. SHERWELL recalled two cases which he had treated where the entire tongue and inner side of the lip were affected with a nacreous layer composed of thick scales. He had treated these cases by the local application of the acid nitrate of mercury. One case, an Irish contractor in whom syphilis was present, the tongue had become smooth and clear and had remained free for the past eight years.

Dr. KLOTZ considered that a great many cases depended upon the syphilitic condition, but a certain number existed without any suspicion of syphilis.

A Case of Lupus Vulgaris. Presented by Dr. Bulkley.

Miss R. F., aged 15, an Austrian. There is no history of tuberculosis in the family, and the patient's general health has always been good.

When a year old an eruption appeared at the left angle of the jaw, and spread until it involved the area occupied by the present lesion and scar. It was operated on once or twice in infancy, but the operation did not include the entire area; since then it has been treated by ointments.

When first seen, April 28, 1903, there was an area about three inches long by an inch wide, occupied partly by scar tissue with a large amount of brownish-red, pulpy, lupus tissue, a little raised above the surface, with more or less general redness. On pressure with a glass spatula the brown tubercles of lupus were most clearly demonstrated.

The treatment by the X-ray was begun at once and continued to the present time, except during June when the diseased area was red, swollen, succulent, and crusted in places. A static machine was used, with twelve

thirty-coil plates, the tube regulated to a vacuum of one and a half inch spark, with the target about four inches from the skin. Twenty-eight treatments were given, aggregating 134 minutes, averaging about five minutes each.

At present the diffuse inflammatory redness has disappeared, many of the lupus nodules have disappeared entirely, leaving almost normal tissue, and those remaining are much flatter and less distinct. Some of these are visible only on firm pressure with a glass spatula.

It is proposed to continue the treatment until all the area is normal.

A Case of Parapsoriasis Guttata (Brocq). Presented by Dr. A. D. Mewborn.

Bridget C., single, domestic, aged 61 years, born in Ireland. Applied for treatment September 11, University Bellevue Clinic. Previous history:—Had small-pox at three years of age. Measles when a child. Health has always been good. No specific history. Present eruption first appeared about eight or nine years ago as reddish, scaly, circular patches on the wrists and arms. These patches became larger and extended to the chest and back. The largest patch was about the size of a half-dollar. There was no itching or other subjective symptoms. The eruption became worse in the winter and almost entirely disappeared in the summer. Patient has suffered for the past nine years from varicose veins of the legs and has had varicose ulcers of both legs.

Status Præsens.—On the inner and posterior surfaces of the arms are a number of pinkish red, non-infiltrated, slightly scaly, circular patches, some of which have a yellowish horny crust, thick in the center and fading off to a thin white edge. This crust can be easily detached with the finger-nail and resembles a wax wafer stuck on the skin. There are no bleeding points left as in psoriasis, but only a smooth, shiny, red surface, if anything, slightly depressed. Surrounding the shiny red patch left by removing the wafer-like crust, is a narrow, crenated band of closely adherent horny tissue. There are scattered patches on the back, sides of the chest, abdomen and legs. In the fleshy folds of inguinal region the patches are smooth and moist. On the legs near the ankles are tense, hard, infiltrated patches apparently the relics of former varicose ulcers. Near the upper margins of the leg patches are several isolated circular red patches without any tendency to scale formation, but if scratched, the shiny, wax-like scale resembling psoriasis appears, but further scratching fails to reveal the smooth, shiny surface with punctate hemorrhagic points—so typical of psoriasis. The face, scalp, neck, hands and feet are entirely free of any skin lesions. The tongue has numerous fissures and furrows which the patient states has always been so. There are no glandular enlargements or symptoms of syphilis. A

small ulcer on the inner surface of the lower lip is quite evidently caused by the sharp edge of an accumulation of tartar on the lower incisors. I have been unable to obtain a biopsy for histological examination.

Brocq describes, in an article on Parapsoriasis (Annales de Dermat. et de Syph., May, 1902), a case closely resembling the one here presented, except in the age of the patient. His case was a girl aged 13, healthy, but of slender development, affected since six years with an eruption on the upper and lower limbs and almost the entire trunk. Her face, hands and feet were free. There was some slight pityriasis of the scalp. The eruption consisted of superficial "taches" without the least appreciable infiltration of the dermis, rose tinted in color, round and varying in size up to a ten-cent piece. They were scattered without order, in places nearly touching, but always distinct one from the other. They were covered by dry scales of a grey, slightly brownish color, becoming white on scratching and each one seemed to be constituted of a single piece as small wax wafers pasted upon the skin. With care they could be detached entire, leaving the skin scarcely red—no hemorrhagic points. There were no subjective symptoms.

Dr. Sherwell suspected that there was a syphilitic base upon which psoriatic lesions had developed. He considered the scars on the legs as luetic. He thought that a symbiosis of psoriasis and a late tertiary syphilide would account for the atypical psoriasis lesions.

Dr. Klotz thought the case corresponded very closely to the cases described by Brocq as parapsoriasis. He did not consider that there was any ground for considering the existence of syphilis. The hard infiltrated bands of skin around the legs he described as a dermatitis hemostatica.

A Case of Parakeratosis Variegata (Unna), Lichen Variegatus (Crocker) or Erythrodermie Pityriasique en Plaques Disséminées (Brocq). Presented by Dr. Samuel Sherwell.

Mr. C. W., æt. 30; born in Brooklyn. German and Hebrew parents from middle Germany. Man of moderate stature, well developed, good dentition.

Had diphtheria when about 2 years of age, and ordinary exanthematous diseases in infancy. Always had good appetite and digestion. Habits of life perfectly correct—no venereal diseases, and family history exceptionally good—appeared at office July 11, 1903, presenting the following picture: The trunk, from the neck down, was covered with a large number of light and dark brown pigmented areas, not presenting any elevation or *but slight* in the *largest* and most marked; some having a circinate outline, and having central spots as of sound or cured skin, somewhat resembling psoriatic patches in course of improvement. On pressure all of these would blanch somewhat, showing a hyper-

æmic condition. On the upper extremities about a third of the skin surface was also affected, and in the same way, with same gross appearances. The lower limbs as far as feet and on dorsal surfaces there was the same conditions. On some of these patches a slight, somewhat adherent, furfuraceous desquamation was present. There was little or no subjective symptoms, except it might be slight and occasional pruritus. As in cases reported by Dr. James C. White, the difficulty of diagnosis was obvious, as while in some degree having characteristics of erythema multiforme, psoriasis, seborrhoic eczema, exaggerated form of pityriasis rosea, pityriasis rubra pilaris, lupus erythematosus, leprosy, etc., it was evidently none of these—to all intents and purposes, while it seemed to me that under treatment it improved for two or three weeks, it now presents the same characteristics it did at first visit. Another possibility presents itself, that it may be of the so-called premycotic stage of mycosis fungoides, this is the more probable alternative in my mind—if it be not one of those anomalous skin affections called by Brocq, "erythodermie pityriasique en plaques disseminées"; and which it greatly resembles. Two cases described by J. C. White and C. J. White under that title, (December number, 1900 of the JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES) greatly resembles this in appearance and history and as such a case I present it to-night.

DR. WINFIELD and DR. ALLEN considered the case as one of mycosis fungoides.

Dr. BULKLEY was not entirely satisfied that it was mycosis fungoides. He thought the patches were too sharply defined, especially one on the forearm with its straight line border, for mycosis fungoides. He accepted Dr. Sherwell's diagnosis.

Dr. ROBINSON considered the case a typical one of mycosis fungoides. He failed to see the signs of parakeratosis mentioned by Dr. Sherwell. It was quite common in mycosis fungoides, especially in the premycosic stage, for the eruption to fade and then get worse.

Dr. Fox considered the straight lines and semicircles as well as the fantastic forms of the eruption as characteristic of mycosis fungoides.

Dr. MEWBORN considered the entire absence of itching as being against the diagnosis of mycosis fungoides. Most of the patches showed almost no infiltration of the dermis. The patches on the sides of the chest, where there was some infiltration, showed shiny papules resembling lichen papules. There was undoubted parakeratosis—scratching with the nail revealed a fine scale. He rather favored the diagnosis of Dr. Sherwell, that is, placing the case in the parapsoriasis group with strong lichenoid affinities.

Dr. DADE considered the periodic disappearance as quite characteristic of mycosis fungoides. The variety manifested in the eruption was also confirmatory of that diagnosis.

Dr. Klotz did not consider it a case of mycosis fungoides; the absence of all itching was against it.

Dr. Sherwell (closing the discussion) thought the disappearance of the eruption in winter, the sharply defined patches limited by lines or distinct angles, as well as the entire absence of itching as quite characteristic. There was distinct desquamation in places. The color was also quite peculiar, varying from a dull pink to brownish coffee colored patches. Another point he wished to call attention to was the absolute freedom of eruption on the parts exposed to light—the eruption being sharply limited at the shirt collar line on the neck. This was in accord with the description given by Unna.

Case of Scleroderma with Symmetrical Ulceration of the Fingers and Toes. Presented by Dr. Fox.

The patient, a Scandinavian woman, 56 years of age. (Notes of case furnished by Dr. Lyle.) Fifteen years ago the ends of the fingers began to turn white and the sense of touch was lost. The fingers then turned blue and began to ulcerate. There was at times terrible pains in the nails. The following summer there was some improvement, but as winter came on the same condition returned. At present the ends of the fingers appear drawn and the skin tightly stretched. Two years from the first symptoms, the same manifestations occurred just below the outer malleoli of both ankles. At this time the skin on the face became tight and gave a very pinched expression,—the mouth was puckered so much that the tongue could scarcely be protruded. The teeth began to decay rapidly. In 1896, the patient was treated at the Skin and Cancer Hospital for three months with a three per cent. ichthyol ointment externally and thyroid extract internally. In 1902 readmitted for a time; treated as before. In 1903 returned for a course of treatment by the X-ray. At present there is some improvement, no ulceration, but some pain and considerable tightness of the skin.

ABSTRACTS.

Hard Chancres and Chancroids, the Question of Changes of the Vessels in. T. M. Himmel. (*Russ. Jour. Skin and Ven. Dis.*, 1903, V., 53.)

The investigations of various writers in regard to the changes of vessels in hard chancres do not, up to the present time, lead to any positive conclusions. Some reported changes in the arteries and veins, while, according to their opinion, the lymphatic vessels are not involved in the process. Other writers find that the main changes are in the lymphatic vessels and veins, the changes in arteries they consider as secondary.

Although Himmel acknowledges that it is hard to determine in examining a

densely infiltrated specimen whether we have before us a vein or a lymphatic vessel, he, nevertheless, considers that in using Weigert's and Van Gieson's methods in such a manner that one section is stained after Weigert's and the following section after Weigert's and Van Gieson's methods, the investigator can arrive at safer conclusions.

His investigations refer only to hard and soft chancres, but not to ulcers of mixed infection. The chancres were obtained from the prepuce and scrotum.

In comparing the results obtained from his investigations he arrives at the following conclusions: (1) In both hard and soft chancres the arteries, veins and lymphatic vessels are affected in the places which are densely infiltrated; the arteries are more involved than the veins and lymphatic vessels. The changes in a hard chancre are greater and differ in quality from the changes in a soft chancre.

(2) In the periphery of a densely infiltrated portion of a hard chancre, the veins and lymphatic vessels are mainly affected, the arteries are either entirely intact or there is only a hypertrophy of the connective tissue fibers of the adventitia. In the periphery of a soft chancre the involvement of the vessels is less pronounced and the lymphatics are more affected than the veins, while the arteries are entirely normal, only in very rare cases an insignificant infiltration of some portions of the adventitia can be seen.

(3) The central portion of hard chancres, which are only slightly developed, and also in chancres accompanied with an œdema, the same changes are seen as on the periphery of well developed ulcers.

(4) Thus the difference between the changes of the vessels in a hard and soft chancre is that in a hard chancre we see a hyperplasia and a hypertrophy of the connective tissue fibers of the adventitia and analogous changes of the media and intima accompanied with a proliferation and swelling of the endothelium, while in a chancroid destructive changes of all three walls of the vessels are visible with a desquamation and contraction of endothelium.—Lapowski.

Carcinomatosis of the Skin, Case of Disseminated. G. T. Meshchevski (Pospelov's Clinic). (*Russ. Jour. Skin and Ven. Dis.*, 1903, V., 849.)

The case presents so much interest for the dermatologist, clinician and anatomopathologist that, although only reported at the Moscow Dermatological Society, it deserves to be brought to the general attention of physicians. Furthermore, the case was presented in such a masterful way, with such clinical and histological details, that it can be considered as an original contribution unfortunately published among society reports.

The patient was an unmarried woman of forty years of age. Out of eighteen children born to her parents, twelve died in childhood of various infantile diseases. One brother of forty died from tuberculosis of the lungs, one sister succumbed to carcinoma of the œsophagus, the other members are well. The patient was born when her father was fifty years and her mother forty. Up to her thirty-ninth year she did not suffer from any serious disease. A year before her death a tumor appeared in the lower portions of the abdomen, which was removed, and according to the physician's statement proved to be cysto-carcinoma papilliferum. In the last year, in the fortieth of her age, the present skin eruption appeared. The breast began to increase in size and harden, without producing any pain. Simultaneously somber, dusky, itching spots appeared on the skin of the breasts, gradually small tubercles came into view upon the spots, their redness disappearing with the growth of the tubercles, which developed slowly. To the touch the enlarged breast revealed a tumor of hard elastic density, consisting of separate pear-like formations, corresponding to the glands of the mammæ The nipples, although changed, were not drawn in. They were painless, neither at-

tached to the skin, nor to the muscles below. The left breast was larger than the right. The glands in the axillæ and on the external borders of both pectoral muscles were hard, movable, separate and slightly increased. The eruption was localized upon the skin of both mammæ, upon the lower parts of the breast, upon the anterior-lateral walls of the chest down to the hypochondrium and up to the axillæ and from here in parallel lines alongside the intercostal spaces spreading upon the back, reaching nearly the line of the vertebræ. The whole foregoing surface was covered with a great number of small, partly isolated, partly bunched tubercles upon an unchanged, or slightly pigmented, skin.

The fundamental lesion in the developed stage was a small pea-sized, hard, sharply defined, tubercle of dusky, lilac-rose color, with a flat, smooth, polygonal surface. Before the appearance of the skin tubercles, diffuse, cherry-like redness was noticed, accompanied by a slight œdema, and upon this base, ten or twelve days' miliary tubercles appeared. With their development the œdema diminished, the redness faded, leaving only a red border around the basis of the tubercle and then disappearing entirely. In the older tubercles, dark, dusky violet points could be seen, probably due to hæmorrhages. The eruption was accompanied with a local itching.

The examination of the internal organs (Gorbachev) revealed an exudation in the left pleura, which proved to be hæmorrhagic. (There are no details given of the character of the exudate. L.) Slight changes in the left lung, heart, kidney. Liver was normal in condition Temperature normal. Blood: hemoglob. 75 per cent.; 4600000:8000. The condition of the patient during her stay in the hospital got worse, ascites and diarrhœa developed and she died with symptoms of heart failure.

The autopsy revealed: *cancer mammæ, uterusque; disseminatio cancrosa cutis, peritonei. Peritonitis et pleuritis sinistra seroso—hæmorrhagica. Œdema et hypostadis pulmonum. Collapsus pulmonis sinistri. Tuberculosis petrificata apicis pulmonis sinistri et glandulæ bronchialium. Atrophia fusea cordis. Anœmia lienis, renum. Cystoma ovarii dextri. Œdema et hypostasis cerebri et meningum.* During life several pieces of skin in various stages of involvement were excised and microscopically demonstrated that a cancerous new growth was spreading alongside the lymphatics, with a peculiar tendency to grow upon the free surface.

According to the anatomo-pathologists (Vlasov) the primary carcinoma developed in the right ovary and then spread alongside the lymphatics of the peritoneum, and intramuscular lymphatics of the diaphragm to the pleura, from the pleura it spread by the way of lymphatics to the breasts, and then through the superficial minute lymphatic branches of the skin of the region of the breasts to other mentioned regions of the skin.—Lapowski.

Epidermolysis Bullosa Hereditaria Vel Congenita, So-Called Dystrophic Form of. V. T. Stanislawski (Podwyssotzki's Laboratory). (*Russ. Jour. Skin and Ven. Dis.*, 1903, V. 149.)

Hallopeau described a form of epidermolysis bullosa, which he considers as different from the "simple" form of epidermolysis bullosa. He called the new form epid. bull. dystrophica. Stanislawski had a patient suffering with "epidermolysis dystrophica" under his care for twenty months in the hospital, and used this opportunity for determining whether Hallopeau's form is really a distinct form entitled to a separate name. The patient, a man of 18 years, has been suffering from epidermolysis since infancy. He is the only child. Both parents, after being divorced, re-married and the children, both of his father and four of his mother are free from diseases. In the parent, the disease appears in form of blebs upon the elbows, knees, malleolar region, fingers and toes. There are

pigmentary spots upon the posterior surfaces of curæ, forearms, wrists and soles. Trauma usually evokes blebs. On the trunk, neck, shoulders and buttocks there could be seen urticaria-like whitish elevations, the distribution of which resembled a geographical chart. These elevations did neither disappear nor change. Upon many of them miliary elevations were scattered.

The writer cut out small pieces of skin affected with the foregoing elevations, with milium-like formations and with pigmentations; each excised portion comprised a part of healthy skin. The histological examination revealed a chronic periarteritis and periphlebitis with changes in the elastic tissue, the fibers of which were thinned and in some places disappeared entirely, thus favoring venous stasis and circumscribed œdemata of skin with swelling and separating of the fibers of the perivascular membrane. From these histological changes the writer concludes that Hallopeau's nomenclature, which only suggests abnormal condition of the epidermis, does not indicate the real condition of this form.

Lupus Erythematosus, the Sclerodermic Type of. Wilfrid B. Warde, M.D., M.R.C.P. (*Brit. Jour. Dermat.*, 1903, XV., p. 277.)

The author gives in series a number of cases reported by various eminent observers as lupus erythematosus associated intimately with sclerodermia, which in his opinion support his theory; namely, that any disease capable of producing œdema or erythema of the skin, when conditions are favorable, may give rise to lupus erythematosus. Without entering into the details of all these cases, which are well worth careful study however, the main point of resemblance is that the withering of the ears which occurs in so many cases of lupus erythematosus is singularly like that encountered in the diffuse type of sclerodermia. The main difference between the two diseases is that lupus erythematosus attacks the superficial parts of the skin, whereas in the majority of cases sclerodermia attacks the deeper layers, and especially the subcutaneous tissues in which the larger vascular trunks lie. Histologically there is a close connection between lupus erythematosus and the superficial types of sclerodermia So close is it, in fact, that it is possible to conceive of them as being the same malady influenced merely by the power of resistence of the vessels In the latter the vessels give way at once and become entirely obliterated Hence the rapid scar formation and the great tendency to necrosing lesions.

Hence the author applies the term, "sclerodermic" to lupus erythematosus without implying that the two processes are identical although it is the author's personal opinion that sclerodermia forms the end of a pathological chain of which lupus erythematosus is the middle, and that the cases under consideration are on the boundary line between the two.—Mewborn.

Erythema Multiforme, an Anomalous Case of, in a Patient with Cardiac and Renal Disease. Arthur Whitfield. (*Brit. Jour. Demat.*, 1903, XV., p. 273.)

The case was a market-woman, aged 19 years, who was admitted to King's College Hospital on account of a severe pain in the abdomen and the passage of blood per rectum. She had a tubercular family history, but had been well until two years prior to admission, when she suffered from pain and swelling of legs. There was advanced mitral incompetency, with some pulmonary congestion, but compensation seemed fairly good. The urine contained albumen with hyaline and granular casts, blood cells. Her condition improved under general treatment, and all symptoms of the uræmic condition disappeared, when her temperature suddenly arose to 102.2, and a rash appeared on the face, spreading to arms and chest. Owing to the prevalence of small-pox and the slight resemblance of the eruption to this disease, the patient was isolated. There were papules, tensely distended

vesicles and thick crusts. There was no grouping of the lesions nor tendency to peripheral extension. The temperature subsided gradually in five days, while the eruption had entirely disappeared in two weeks, leaving a few superficial pits. A successful vaccination was practiced during the attack. Three days later the temperature again rose to 102, with the appearance on the next day of a second crop similar to the first, but much more numerous, in places resembling confluent small-pox. In a couple of weeks the temperature and skin returned to normal. No further lesions developed and the patient was able to leave the hospital in a fair state of health, although, of course, the heart and kidneys were in an irrecoverable condition. Bacteriological examinations were made of the vesicular contents, but only non-pathogenic staphylococci were found. On a histological examination of one of the lesions the epidermis was found raised *en masse* from the papillary body, and additional cavities were found in the rete mucosum; both of these cavities were filled with coagulated serum and migratory polynuclears. Taken as a whole, the lesions seemed to suggest the acute bullous change found in severe toxic inflammations, rather than due to micro-organisms.—Mewborn.

Erythemata as Indicators of Disease. James Galloway, M.D., F. R. C. P. (*Brit. Jour. Dermat.*, 1903, XV., p. 235.)

In his presidential address delivered before the Dermatological Society of Great Britain and Ireland, Galloway reviews this subject from the time of Willan, who, while recognizing the symptomatic value of the erythemata, was guided principally in his classification by the fact of their occurrence in what he considered to be a contagious disease or not. Thus for Willan the criterion of contagiousness was his reason for separating the rash of puerperal fever from that of rubeola or scarlatina. It is clearly evident that the erythemata, considered as distinct conditions, cannot be classified upon this basis. Colcott Fox divides the erythemata into (1) those due to local irritation (so-called idiopathic), and (2) those due to internal causes (symptomatic), and of the latter the majority are symptomatic of all sorts of toxic and infective conditions of the blood. While Crocker divides the erythemata into two main groups—one the result of hyperæmia only, the other due to actual inflammation—and that a large proportion of both classes of erythemata are of toxic origin, the toxin acting in all probability on the vaso-motor nerves, Galloway simplifies matters by dividing them into two groups—one the result of simple hyperæmia, transient in character, causing no permanent change in the skin; and the exudative erythemata in which, as a result of hyperæmia, transudation, and exudation, as well as actual inflammation, changes in the structure of the skin occur, which are apt to be of some duration, or, in certain cases, permanent.

Of the first group, the most characteristic example is ordinary flushing, yet marked vascular disturbances may be associated, such as tachycardia. In some cases the pulse rarely falls below 100, and may be counted up to 150 to 160. Where there are congested extremities the pulse rate may descend to 40. Such individuals usually suffer severely from chilblains. The author considers that some of these cases under the influences which fail to regulate the expansion and contraction of arterioles may give rise to the condition described as "erythema induratum," and in very severe cases the œdema of the cutis associated with paralytic distension of the superficial capillaries may end in necrosis and ulceration. Such a case was reported by the author in the *British Journal of Dermat.*, p. 199, 1902. This case was of a sufficient rarity to justify a brief summary. The patient, a young woman, suffered for twelve or fifteen years from a general and almost constant congestion of the whole cutaneous surface. There was tachycardia and the formation of an extraordinary amount of fat throughout the body. The slightest injury produced nodules like erythema induratum on the skin, which necrosed and ulcerated in course of time.

After several years of almost complete invalidism there suddenly developed a gangrenous process of the whole left breast, which was preceded by severe pain, but became insensitive to touch, the gangrene extended to the side of trunk and death followed in four days. On autopsy the staining produced by post-mortem lividity on the dependent part of the body was not greater than the cyanosis of the anterior part of the trunk, extremities and of the face. There was excessive accumulation of fat in the omentum, subcutaneous and subperitoneal tissues, in fact, wherever fat could be deposited. There were no gross organic lesions. The most noticeable feature of the histological examination of the skin made by Macleod was the enormous dilation of the blood vessels in the corium. In places these were dilated until they had become large cavities lined by endothelium. There was also inflammatory cellular infiltration around these dilated vessels. This case shows that simple forms of erythema may pass on to true exudative lesions. Galloway describes also the peculiar polycyclic erythema with cutaneous œdema found in two cases of trypanosomiasis seen by him with Manson at the School of Tropical Medicine. The eruption was faint, circinate erythema on an œdematous skin, leaving a certain amount of pigmentation—an appearance quite different from that of any other erythematous disease.

In "Sleeping Sickness," described by Castellani, there is also a papulo-vesicular eruption on an erythematous base. Of course the most common type of exudative lesions are found in erythema polymorphe due to toxins produced as the result of improper food, or of its improper digestion or elaboration in the tissues. He refers quite extensively to the cases reported by Osler, which emphasize the close relationship between the erythema group and serious visceral affections; in fact, Galloway has contributed numerous observations pointing to the close connection between erythema polymorphe and Bright's disease. The cutaneous lesions in these cases are acute, symmetrical, widespread, with a tendency to vesicate and become hemorrhagic and involve the visible mucous membranes. Finally, the author dwells upon the relationship of erythema polymorphe and lupus erythematosus, views which have already been abstracted in these columns.—Mewborn.

Favus of the Scalp, A New Method of Treating without Epilation, which Guarantees a Permanent (No Relapses) Cure in Two to Three Weeks. V. F. Veljamovitch. (*Russ. Jour. Skin and Ven. Dis.*, 1903, V. p. 337.)

The remedy which produces the wonderful results indicated by the writer in the title is a 5 per cent. to 10 per cent, solution of formalin applied twice daily to the scalp after removal of the scabs, and then cover the scalp. Good results are reported by other Russian writers.—Lapowski.

Herpes of Left Upper Division of Fifth Nerve with Ocular Paralysis: Paralysis of Right Third Nerve with Iritis; Diabetes. Arthur Hall. (*Brit. Jour. of Dermat.*, 1903, XV., p. 311.)

The case is considered of interest on account of the association of an herpes ophthalmicus of the left side and complete paralysis of the left third and fourth nerves which was followed eight weeks later by a severe pain in the right eye and a partial paralysis of the right third nerve and an iritis of the right side. The explanation seems to be that the patient is suffering from diabetes. As is well known, in this disease it is not uncommon for paralysis of ocular nerves and iritis to occur, probably as the result of a toxic neuritis. Such was probably the cause of the right-sided intercurrent paralysis, and possibly the cause of the herpes and paralysis of the left side. It is curious, however, that whilst neuritis in various parts is not uncommon in diabetes, yet herpes in any form apparently is.—A.D.M.

Leprosy, (1) Some Cases of, in New-Born and their Importance in the Question of Hereditary Transmission of Leprosy.. (2) The Importance of Heredity in the Spreading of Leprosy. D. F. Reshetillo. (*Russ. Jour. Skin and Ven. Dis.,* 1903, V., p. 143.)

The writer had an opportunity of studying leprosy during his ten years' sojourn in Jerusalem as an attending physician to the Russian, French and German hospitals.

He had the rare opportunity of seeing pregnant leprous Mohammedan women and their new born infants.

He gives the history of a boy born of leprous parents, who exhibited on the third day of his birth anæsthetic patches between the shoulders, on the lumbar region, buttocks and lower extremities. Tubercles developed on the patches on the ninth day and on the twelfth bullæ appeared, and the boy died on the eighteenth day. A great number of leprous bacilli were found in the contents of the bullæ and in the expressed liquid fluid of the tubercles. The writer is of the opinion that there is no hereditary transmission of leprosy except through infection, and such an infection is of small importance in the rôle of spreading leprosy, as usually such children die very early.—Lapowski.

Lepra Bacilli (The Fate of) in the Organism of Animals (Guinea Pigs). V. V. Ivanov. (Metchnikov's Laboratory in Pasteur's Institute, Paris.) (*Ruh. Jour. Skin and Ven. Dis.,* 1903, V., p. 3.)

The very interesting work of the writer is not adapted for an abstract only that the following résumé can be given.

Cutaneous lepromata excised from a willing patient, without anæsthesia, were reduced to an emulsion and injected in various amounts into the abdominal cavity of guinea-pigs. After twenty-four hours nearly all bacteria were found taken up by phagocytes. On the third day after injection the rôle of phagocytes was played by the mononuclear cells, especially in the omentum. Even eight months after injection the leprous bacilli could be found in large numbers in the organism of the guinea-pig. The bacilli penetrate into remote organs, as spleen, liver, kidneys, and bone marrow, not only after injection into the abdominal cavity, but also when injected under the skin. In the spleen a well developed polynuclear leucocytosis is found. The lepra bacilli even after being exposed to a temperature of 120 degrees C. and then injected retain their full immutability or stability two months after injection. One guinea-pig in which the bacilli were injected into the abdominal cavity, revealed, eight months after the injection changes in the omentum, which with great probability suggested the possibility of the multiplication of lepra bacilli in the organism of guinea-pigs.—Lapowski.

Lupus Vulgaris, Treatment of. Dreuw. (*Monatshft. f. Prkt. Dermat.,* 1903—XXXVII—193.)

This is another treatment from Unna's Polyclinic. It consists in freezing the patch with chloride of ethyl and rubbing forcibly into the frozen surface by means of a swab crude hydrochloric acid. This makes the surface whitish gray. As soon as the patient complains of burning pain, the patch is frozen again and the acid reapplied. The action of the acid is most intense on the lupus tissue. During the operation the sound skin is to be protected from the acid by wiping away any acid with absorbent cotton. Single nodules can be bored into by a sharpened stick dipped in the acid after freezing. The patch is to be dressed with a disinfecting powder and covered with a bandage or gauze held in place with sticking plaster. A crust forms in two to four days, which falls in eight to fourteen days. In three to four weeks there is a smooth surface. If any lupus nodules are present they can be bored out as described above. As the method had been used only four months when it was reported on, it is too early to speak of the permanent result.—G. T. J.

Melanoblasts, Hemichromasin and Fibrillation of the Epithelial Cells in Condylomata Lata. V. Ehrmann and Moritz Oppenheim. (*Arch. f. Derm. u. Syph.*, 1903, LXV., p. 323.)

A very interesting and convincing contribution to the question of melanoblasts and the origin of pigments in the skin. We can only give the conclusions to which the writers arrived, referring the more interested readers to the original. (1) In the epidermis of condylomata lata a hypertrophy of both epithelial cells and of the melanoblasts takes place, and (2) such epithelial cells, owing to their changes, lose the capacity of absorbing the pigment from the melanoblasts. (3) In the external periphery of the condylomata the pigment is increased both in the epithelial cells as in the melanoblasts, while in the center of the broad condylomata the pigment is lacking in the epithelial cells and the melanoblasts have disappeared. (4) The melanoblasts of the epidermis are independent cells of mesodermic origin and are neither exudations of the intracellular spaces nor optical appearances of epithelial cells. (5) The hemichromasia, which takes place in broad condylomata, as in other processes, is due to distribution of water in the cell body, which, like other cells, consists of protoplasma fibers and main substance with different amount of water (6) The position of the hemichromatic pole depends upon the process of vaporization or cornification of the superficial surface. Melanoblasts can not originate from leucocytes.—Lapowski.

The Naevus Question. Erhard Riecke (Riehl's Clinic.) (*Arch. f. Derm. u Syph.*, 1903, LXV., p. 65.)

The histological genesis of nævus is still a disputed question. Many histologists and dermatologists are inclined to accept Unna's theory, that nævi are of epithelial origin. The author champions the opinion of Riehl, that the nævi are the products of embryonal connective tissue cells, and to substantiate this opinion he undertook a careful investigation. From an abundant material, extending to about one hundred soft nævi, obtained by biopsy from subjects of various ages, ranging from infants to old men, he draws conclusions which prompt him to accept the theory of Riehl. He does not give a histological picture of nævi, but taking up each distinctive histological feature of nævi, as given by various writers, he compares it with his own findings, and submits the following conclusions: (1) The nævus cells are of genetic association with cells of the connective tissue of the embryonal cutis (2) These embryonal cells remain upon a low scale of development, producing less connective and elastic tissue than the normal cells; but they have the capacity even in old nævi to start rudimentary formation of connective tissue (3) Owing to the early impediment of their development, the form of nævus cells is in the beginning more like the embryonal cells of the cutis. The later changes in the form of the cells is partly due to changes produced by the age of the cells and partly to the secondary pigmentation. (4) The cells can multiply, but their descendants are undeveloped connective tissue cells as far as their function is concerned. (5) The arrangement of the nævus cells is in accordance with the interspaces of the connective tissue, which sometimes differ from normal in the zone of the nævus and is only insufficiently developed. (6) The masses of nævus cells forcing their way into the papillary layer produce a thinning of the epidermis, by stretching. Pictures, which can be regarded as cellular epithelial cords are due to the pressure of masses of the nævus against the epidermis. This pressure can even reach such a development, that the regularly present connective tissue layer with elastic fibers may entirely disappear. (7) The pigment plays only a secondary rôle in the development of the nævus.—Lapowski.

Evanescent Irritative Oedema of the Skin and Its Clinical Occurrence. L. Philippson. (*Arch f. Derm. u. Syph.*, 1903, LXV., p. 387.)

A very spirited controversial article, where the writer re-affirms his standpoint of the origin of urticaria and combats the opposing views of Neisser and Jadassohn, who still consider urticaria as of angioneurotic origin.

To substantiate his point of view the writer not only brings as evidence Török and his own experiments, but brings forward pathological and clinical facts which tend to corroborate his point of view, that urticaria is due to direct influence of the pathogenic cause upon the vessels and it is thus of inflammatory origin. Furthermore, that the irritating substance which causes the urticaria must be present in the place where the manifestations occur; be it that the substance reaches the place directly from outside through the skin, or was transported by the circulation from the inside to the affected locality.—Lapowski.

Parapsoriasis. (Brocq.) A. Bucek. (*Monatshft. f. Prkt. Dermat.*, 1903—XXXVII —141.)

This is a very careful study of the subject. Our author affirms that the "parakeratosis variegata" of Unna; the "dermatitis psoriasiformis und lichenoides exanthem," and the "dermatitis psoriasiformis nodularis" of Jadassohn; the "érythrodermies pityriasiques en plaques disséminees" of Brocq; the "lichen variegatus" of Crocker; and "parapsoriasis" of Brocq are all one and the same disease, for which she thinks the last name is the best name. To support her thesis she quotes freely from many writers. While she finds certain points of difference in the descriptions, she also finds that there are so many points of resemblance, and so many cases in which there are mixed forms, that she is forced to conclude that they are all types of one disease. They all appear spontaneously; are markedly chronic, with no tendency to cure; have no subjective symptoms; resemble both psoriasis and lichen; and differ from psoriasis in the absence of abundant scales and papillary bleeding on scratching of sites of predilection, and of involvement of the scalp. Moreover, by study of the disease it will be found that papules by flattening out become maculo papules and at last macules. Histologically the points of resemblance are more numerous than those of difference. It is a polymorphic disease, like dermatitis herpetiformis, with three different types, the nodular, the macular and the mixed.

The macules are slightly scaly and vary in size from that of a lentil to that of a fifty-cent piece, but may become as large as the palm of the hand by confluence of several macules. They are pale, deep, or blue red, in color; round or irregular in shape, but usually well defined. In most cases they are disseminated, but they may arrange themselves in nets, stripes, rings, or diffused plaques. The scales are small, dry and white, and cover the lesions evenly. Rarely they are large so as to cover the whole lesion, or small and located in the center. When removed they most often leave a glistening, rosy surface.

The papules are flat, pale to dark red, soft, isolated, less frequently grouped in stripes or rings. They vary in size from pinhead to lentil; are usually scaly like the macules, the scales showing at times a central thickening. If without scales they are very red, often waxy like lichen papules. They stand in no relation to the hair follicles or sebaceous glands. They may develop from macules or change into macules.

The course of the disease is exceedingly chronic, at times getting a little better or a little worse, and seemingly influenced by temperature changes, being worse in cold weather. The scalp is never affected; the face, palms, axillæ, popliteal spaces and genitals are rarely involved. Slight itching is the only subjective symptom, and the general health is uninfluenced. Treatment may ameliorate, but does not

cure. The youngest patient was three years old, the oldest sixty-seven. More men than women are affected.

Histologically the disease affects the epidermis and upper part of the cutis, and shows itself as an inflammatory affection of medium grade with slight acanthosis, para- and hyperkeratosis. It is diagnosed from *psoriasis* by being less scaly, by having no sites of predilection, by sparing the scalp, by its monotonous course and obstinacy to treatment, and by its lesions not clearing in the center. From *lichen planus* it differs in its papules not being firm, waxy, and polygonal; in their lighter red color and absence of pigmentation on healing. They do not present the central umbilication; are more scaly; not so itchy; more chronic; and have no sites of predilection. *Pityriasis rosea, seborrhœal dermatitis,* and *syphilis* are readily differentiated by their more rapid course and other characteristic symptoms that are wanting in parapsoriasis. The whole paper is worthy of careful reading.—G. T. J.

Smallpox, Some Observations on. Leslie Roberts, M.D. (*Brit. Jour. of Dermat.,* 1903, XV., p. 313.)

Since the beginning of the winter of 1902, the author has had the opportunity of seeing many of the 1,800 cases which were treated in the Liverpool fever hospitals. Among the obscure points in the pathology of the disease, he mentions his belief that one of the major influences which governs the extension of the disease issues from some central nervous mechanism. The evolution of smallpox is so deliberate; its descent from the head, its flow outwards to the remote parts of the body so steady, so regular, often so swift; the repetition of its lesions so mathematically uniform (unless where modified by special causes), that the conclusion of a central nervous origin controlling the distribution of the disease seems inevitable.

External irritation, produced by garters or corsets, would determine an extra development of the various lesions. Indeed, Hebra went so far as to say that one could sometimes guess the occupation of the patient from these variations in the distribution of lesions.

Another point of practical, as well as theoretical value, is the query: Can two morbific viruses incubate simultaneously in the same body? He answers this in the affirmative as regards even so closely allied pathological processes as vaccinia and variola. The period required before immunity is conferred—the immunizing period of vaccinia—is nine days; while the immunizing point of smallpox is probably not attained until about the eleventh day of the disease—a good three weeks after the disease was contracted, allowing twelve days for incubation. Hence if an individual contracts the two diseases, variola and vaccinia, on the same day, he will manifest in due time vaccinia but not variola. If he be vaccinated on the second day after variolous infection, he will develop vaccinia, but not variola. If he be vaccinated on the third day he may still be protected by vaccinia; but if the vaccination be delayed till the fifth or sixth day after variolous infection, the variola will develop *pari passu* with the vaccinia. He distinguishes, clinically, the two morbid processes by the superficial suppuration of vaccinia and the neoplasmoid character of the true variolous lesions.

He gives the history of a case showing that the child of a mother affected with smallpox may be inoculated *in utero* and in spite of a successful vaccination performed on the second day after birth, the child developed variola on the ninth day. Another case in which the child was born one day before the mother was admitted to the hospital, and where the child was vaccinated immediately, the child escaped the disease although in close contact with the mother who was covered from head to foot with smallpox pustules, The vaccination had been just in

time. Although he makes no mention of efforts to carry out Finsen's ideas of excluding the actinic rays, yet he believes much may be expected from this method in preventing the sudden breaking down of the dense cell-infiltration masses impacted within the epithelium.—A. D. M.

Hereditary Syphilis and Haematoporphyrinuria. E. Volmer. (*Arch f. Derm. u. Syph.*, 1903, LXV., p. 221)

The case reported by the writer is the second published where hæmatoporphyrin with its characteristic spectrum, was found in the urine, and the first case published where the hæmatoporphyrin was found in a patient with hereditary syphilis. The patient was a woman forty-nine years old, who, for several years, was observed in the clinic and who exhibited the characteristic signs of hereditary syphilis with blood extravasations in the skin. The writer is of the opinion that similar blood extravasation occurred in the kidneys, and hence the presence of the hæmatoporphyrin.—Lapowski.

The Treatment of Trichophytosis Capitis with Chrysarobin. M. Hodara. (*Monatshft. f. Prkt. Dermat.*, 1903—XXXVII.—118.)

Hodara has the utmost faith in the use of chrysarobin as a cure for ringworm. He employs a mixture of equal parts of chloroform and glycerine with 5 to 10 per cent. of chrysarobin. After cutting the hair short from the patches, this is painted on once daily for two to four or more days, the applications being stopped as soon as redness and swelling appear. Then the parts are dressed with olive oil until the reaction subsides. Then the scalp is washed with soap and water, and the chrysarobin again applied. A cure is effected in four or five months. While using the treatment a light linen cap with draw-string should be worn. The treatment should be continued for one month after apparent cure.—G. T. J.

Urticaria Pigmentosa. Reiss. (*Monatshft. f. Prkt. Dermat.*, 1900, XXXVII.—93.)

As this disease almost always appears from two to five days after birth, it is thought by our author to be a congenital, most pronounced vasomotor irritability of the skin. The eruption is in many cases most profuse where the clothing presses or rubs. The irritability is thought by some to be peripheral, while others regard it as central. In any event it would seem that external, mechanical irritation is necessary to produce the wheals.

There are three chief varieties of the disease, namely (1) the papular or nodular, which is the xanthelasmoidea of Tilbury Fox; (2) the macular; and (3) the mixed. Besides these there seems to be a form of urticaria with persistent pigment formation occurring later in life, which is allied to the other varieties. The latter is similar, both clinically and histologically, being characterized by mastcells arranged in tumors. This tumor formation is seen in fully developed cases of urticaria pigmentosa. The color of the macules is due to the mixture of the yellow pigment and the red of the ever-present hyperæmia. In old cases the dark brown color is purely pigmentary. The cause of the disease is still a riddle.

Histologically, in one case of the author's, the disease seemed to be a small-celled infiltration of the upper layers of the skin, for the most part about the blood vessels. Between and beyond these cells were found a great number of irregularly shaped mastcells. Many small cysts were found in the epidermis and mucous layer. There was not so much pigment found as would be expected, and this was found mostly in the lowest part of the stratum malpighi.—G. T. J.

Urticaria. Experimental Investigations of the Pathogenesis of. Ludwik Török and Paul Hari. (*Arch. f. Derm. u. Syph.*, 1903, LXV., p. 21.)

The pathogenesis of urticaria is ascribed either to angioneurosis, or to an in-

flammatory process. In order to prove the inflammatory origin of urticaria, the writers endeavored to produce an urticaria upon the skin of dogs by superficial cutaneous injections of various preparations, to which clinically the causation of urticaria is attributed, as ptomaines, toxines, antitoxines, medicines.

Their experiments they divided into three categories. To the first category belong substances (aceton, glycogen, asparaginic acid, indol, skatol, leucin, tyrosin, bilirubin, 50 per cent. alcohol, glycerin), which being injected do not produce œdema or only a very slight degree of œdema, such as produced by pure cold water; the second category presents ingredients (hot water, 30 per cent. of KOH, uric acid, syntonin, casein, antifebrin), which being injected evoke a slight flat œdema of 2-3 mm. in diameter; the third category includes elements (pepton, pepsin, trypsin, cadaverin, putrescin, urea (concent.), carbol, antipyrin, phenacetin, morphin, atropin, bouillon containing toxines of the staphylococcus pyogenes aureus), which being injected cause a hard, tense wheal, showing that a relatively severe exudation took place. Only the substances of the last category are considered by the writers as capable of producing urticaria, i. e., capable of changing the bloodvessels of the skin to such a degree that a serous exudation through the walls occurs.

From the satisfactory results of their experiments they conclude that the urticaria seen in various pathological conditions is produced by the direct action of the agents, or allied to the agents, with which they experimented upon the bloodvessels of the corium—Lapowski.

BOOK REVIEWS.

Progressive Medicine. Vol. II., June, 1903. (Lea Bros. & Co., Philadelphia and New York.)

The subjects digested in this number are the recent contributions to abdominal surgery, including hernia—gynecology. Disease of the blood and ductless glands. The hemorrhagic diseases. Metabolic diseases. Ophthalmology. Dermatologists may find much of interest in the chapter on diseases of the blood; to particularize, the very interesting case of chronic blood poisoning caused by the prolonged use of *acetanilid,* and reported by Stengel and White in the *Univ. Penn. Med. Bull.,* February, 1902. In this case there was marked cyanosis, the skin being lead-colored, while the nails of fingers and toes were almost black. The face was covered with an acne eruption, and there were rings of pigment around the eyes. The blood changes were numerous; the most striking were fragmented and abundant neucleated red cells. In view of the extensive use of headache tablets containing acetanilid such cases may be expected to occur more frequently in the future. The work of Sacquépée on the blood changes in the exanthemata and of Bezançon and Labbé on the behavior of the leucocytes in different forms of infections are of interest. Especially the latter, in showing that infections causing a polymorphonuclear leucocytosis are followed by only a transient immunity (erysipelas, scarlet fever, etc.), while the mononuclear infections, which necessitate a prolonged effort on the part of the organism, confer a solid and durable immunity (mumps, whooping-cough, syphilis and tuberculosis at certain stages).—A. D. M.

Progressive Medicine. Vol. III., September, 1903. Diseases of the Thorax and Its Viscera, Including the Heart, Lungs, and Blood Vessels—Dermatology and Syphilis—Diseases of the Nervous System—Obstetrics. (Lea Bros. & Co., Philadelphia and New York.)

The department of Dermatology and Syphilis, edited by Dr. William S. Gottheil, contains a good survey of interesting cases presented during the past year in

this department. Although great activity has been shown in Actinotherapy and Radiotherapy both in the variety of diseases to which they have been applied and in the modifications of apparatus and technique, yet two facts seem to stand out, namely, that attempts to make smaller and cheaper lamps have not been so successful as the Finsen lamp, with its power to concentrate large amounts of light; and that radiotherapy, unless handled with the greatest care, is a powerful agent for harm and should not be used for trivial affections. Aside from a number of interesting cases reviewed, there has been on the whole few contributions of great value to this field of medicine.—A. D. M.

Le Cloisonnement Vésical et la Division des Urines. By Dr. Fernand Cathelin. (J. B. Bailliere et Fils, Paris.)

The author gives a short description of the various methods, both endo- and exovesical, for obtaining a separation of the urine from each kidney. The ingenious instrument which he has devised with the endovesical membrane, which he fully describes with the technique for its use, has the great advantage of being adaptable to very small and painful bladders. No lateral pockets are allowed to form in which the urine may stagnate, but it is drawn off as rapidly as excreted by catheters on either side of the rubber septum. The efficiency of this septum to prevent intermingling of the urine from the two kidneys was very well demonstrated by Dr. W. W. Keen (*Annals of Surgery,* May, 1903, page 799), who had his assistant inject a solution of methylene blue through one of the catheters into the bladder and see if the urine from the opposite kidney remained clear or was colored by the blue. He states that not until the end of an hour and three-quarters was there the slightest discoloration of the urine from the opposite kidney. Furthermore, only one side of the rubber septum was stained and only one catheter. This would seem to settle the question of leakage under the septum.—A. D. M.

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THE PRESENT STATUS OF PHOTOTHERAPY.

BY FRANK HUGH MONTGOMERY, M. D., Chicago.

Read before the Twenty-seventh Annual Meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE influence of light upon plant and animal tissue; the bactericidal properties of the chemical rays of light; and the history and development of phototherapy, including Finsen's original apparatus and methods, have been described in detail in so many publications of the past five years, that it seems best to limit the present paper to a résumé of results accomplished and to the consideration of recent progress in methods, apparatus and laboratory research.

In looking for results, one naturally turns first to the home of phototherapy, Professor Finsen's Lysinstitut in Copenhagen, where not only has the treatment been used in a larger number of cases than in any other city, but where also the technique of method has been brought as nearly as possible to perfection in all its minutest details. Two months since, I had the good fortune to spend several days in this Lysinstitut, and, in common with all who go there for the purpose, was given every opportunity to study the treatment in all its details, and was shown patients in all stages of progress towards recovery, including some that have remained well for from a few months to five years after cessation of treatment. I also had the good fortune to have a two-hours' talk with Professor Finsen regarding his work, and to go over with him the proof sheets of a complete and exhaustive report, which will soon be available both in Danish and in German, of 800 cases of lupus vulgaris treated in the Institute between November, 1895, and November, 1901.* The tables were prepared with the greatest care, the cases being subdivided into four grades of severity; four grades according to extent of surface involved: and further ac-

*The number of cases treated up to March, 1903, was something over 950.

cording to duration of disease, age of the patient, and with respect to coincident involvement of mucous membranes. The numbers and dates of treatment, the resulting reactions, periods of freedom from disease, dates of recurrences, and subsequent treatments are all accurately and definitely recorded for each case.

The summary of results in these unpublished tables differs but little from the following given by Professor Finsen in his address before the Herbstkonferenz im "Internationalen Central"—Bureau zur Bekämpfung der Tuberculose, Berlin, 1902:

From November, 1895 to December 1st, 1901, 804 cases were treated. On October 1, 1902, the status of these cases was as follows:

I.	Cured		412
	a No recurrence in 2-6 years	124	
	b Under observation less than 2 years	288	
II.	Nearly well (but slight evidence of the disease remaining)		192
III.	Under treatment		117
	a Improved, or healed in part	91	
	b But little or temporarily influenced by the treatment	26	
IV.	Treatment discontinued		83
	a Unsatisfactory result	16	
	b Died (31) or ill of other diseases (13)	44	
	c Outside (financial and other) conditions	23	
	Total		804

Excluding the 67 cases in groups IV. b and c, there remain 737 cases in which the light treatment has been given a fair trial. Of these, those in groups III. b and IV. a, 42 in all or 6 per cent. of the total number, received but little or no benefit; the remaining 695, or 94 per cent., were either entirely cured or benefited by the treatment. Of the 737 cases, 56 per cent. were entirely healed, 17 per cent. having been under observation without recurrence of the disease for periods varying from two to six years. 604 cases, or 82 per cent. of the entire number were either entirely healed or had but slight traces of the disease remaining. This showing is the more remarkable when the fact is considered that the Institute at Copenhagen had attracted to it a large number of cases of from ten to fifty years' duration, in which

all other methods of treatment had failed. Professor Finsen called attention to the fact that among the 91 cases included in group III[a]. there were some with dense scars, hypertrophies, and extensive involvement of mucous mebranes for which the outlook was not very bright, although some improvement had followed the treatment.

The true scientific spirit manifested by Finsen and his associates is now generally recognized, and cannot fail to impress anyone who spends any time or does any work in the Institute. The accuracy and trustworthiness of Professor Finsen's reports cannot be doubted, and they establish beyond all question the value of the light treatment in this disease. Among other things noted in the statistics is the large percentage of mucous membrane involvement. In 72 per cent. of the cases the mucous membranes, usually of the nose, were more or less involved. Recurrences are due chiefly to reinfection of the skin from lupus of the mucous membranes which, in most situations is not amenable to the treatment by light, but has to be controlled by other methods. Moreover it is exceedingly difficult to determine when mucous membrane lesions have been completely eradicated; the fact cannot always be determined without prolonged observation.

The reports on lupus vulgaris from the Finsen Institute alone are sufficiently convincing, but during the last few years many other workers in Europe (among whom may be mentioned Sequeira, Morris, Leredde, Gastou, Chatin, Strebel, Lesser, Schmidt, and Glebowsky) and a few in this country, have testified to the value of phototherapy in cutaneous tuberculosis. Not only is the disease eradicated by the method, but the resulting scars are immeasurably less disfiguring than are those obtained by other methods of treatment, unless it be those sometimes obtained by radiotherapy, or in some instances of circumscribed areas treated by Lang's plastic method.

As should be expected, other workers with the method cannot report quite so favorable results as are secured in the Lysinstitut of Copenhagen. The excellent results obtained in this institute are due not only to the larger experience and to the enthusiasm with which the Finsen followers carry on the work, but also to the care and precision with which every detail of the technique is carried out. So much stress do the operators lay upon the minor matters in technique, that if the visiting physician shows a real interest in the work or proposes to undertake the treatment at home, he is not only given the opportunity but is urged to treat patients in the Institute, that he may better understand and appreciate the value of all the minor details of the

treatment. Some of the comparatively unfavorable reports of other observers are based on the use of small lamps.

In no other diseases have such uniformly favorable results been obtained as in cutaneous tuberculosis, and the available statistics are not altogether satisfactory. Good results have been obtained, however, in a considerable number of cases of lupus erythematosus, rosacea, telangiectases, superficial vascular nævi, and alopecia areata.

In *lupus erythematosus* phototherapy certainly promises better results than have yet been obtained by any other method of treatment. Finsen reported 31 cases with 11 recoveries and 10 still under treatment.* Leredde and Pautrier[1] report 23 cases with 11 recoveries, 6 cured in areas, 3 improved, and 3 failures. Gastou, Baudouin and Chatin[2] report 10 cases with 3 recoveries and 7 improved. Morris and Dore[3] report 11 cases with great improvement in 7, in one of which the disease relapsed on cessation of treatment, 2 still under treatment, and one failure.

Dr. Hyde, Dr. Ormsby and I have treated 19 cases. There were 5 recoveries, but in one of these the disease returned four months after cessation of treatment; 9 showed great improvement, some areas having entirely disappeared; 3 but little improvement, 1 discontinued treatment before it had been given a fair test; and one was made decidedly worse. We have had the most favorable results in cases in which the vascular element predominated, and in two cases in which the duration of the disease was but 8 and 12 months respectively. Lesions with marked infiltration and decided involvement of glands and follicles were much more resistant to the treatment.† Two such cases improved rapidly under radiotherapy. We have had no aggravation of symptoms such as are reported by Sequeira and MacLeod in acute stages of the disease, but in two such cases we found the X-rays decidedly irritating and of no benefit. Other observers report single cases in which the disease was cured or much benefited.

Alopecia areata. Finsen and Forchammer[4] reported 49 cases with 30 cured. Jersild[5] reported 6 cases, all of which recovered. Leredde and Pautrier[1] report 3 recoveries, and 5 cases in which the results were no better than by ordinary methods. Sabouraud summarizes his ex-

*A larger number had been under treatment with a larger percentage of recoveries at the time of my visit to the Lysinstitut.

†The treatments were given, however, with the London Hospital lamp and in most instances with sittings of fifteen or twenty minutes each. We find that longer treatments give better results.

perience with about 40 cases in the statement* that in some cases of long standing which had resisted all other treatment phototherapy had given him rapid and excellent results, but that the treatment was as a rule uncertain and that the reaction obtained probably differed little or none from that produced by other local irritants. He recommends the treatment for small circumscribed areas that has ceased spreading.

Dr. Hyde, Dr. Ormsby and I have treated 8 cases. In two, the disease was limited to a single area of three and four months' duration. In both instances three treatments of twenty minutes each during a period of two weeks were followed by a complete return of hair. In a third case of eighteen months' duration with eight or ten areas, four twenty minute applications to each area during a period of three months was followed by a normal growth of hair. Two other cases were much improved, but three cases did no better than with ordinary methods. While it is difficult to judge of the value of any treatment in so erratic a disease as alopecia areata, the results so far obtained are encouraging and are in keeping with the fact that distinct hypertrichosis can be observed upon the arms of some of the nurses which have been much exposed to the light.

In *rosacea, telangiectasis* and *vascular nævi,* phototherapy should prove, on theoretical grounds, an effective treatment, since Sack and others have shown that among the first changes caused by the reaction are swelling and proliferation of the endothelial cells of the blood-vessels. Finsen[4] reported 25 cases of acne rosacea with good results in 13: 10 cases of vascular nævi with one cured and 9 more or less improved. Leredde and Pautrier[1] report six cases of rosacea, 3 of which had resisted all other treatment, with good results in all. Dr. Hyde, Dr. Ormsby and I have treated 2 cases of rosacea, one of telangiectasis and one of vascular nævi with excellent results in each; also one case of vascular nævus with no improvement.

Finsen, Bang, Bie, Leredde, Morris, Sequeira and others report cases of superficial *carcinoma, epithelioma* and *rodent ulcer* in which phototherapy was used with success. In this class of cases the light is effective, however, in very superficial lesions only, and its use is more expensive and tedious than treatment with the X-rays.

There are also reported a few cases of acne, of ringworm, of indolent ulcer, and of other chronic inflammatory diseases of the skin in which phototherapy was employed with apparent success. The number of cases reported, however, is too small to be more than suggestive.

*Quoted by Leredde and Pautrier.

Apparatus and Technique: Phototherapy gives such positive and satisfactory results in lupus and promises so much in a few other conditions that the method undoubtedly would be in very general use but for the fact that the apparatus employed has been not only expensive to install but even more expensive to maintain. Each application occupies seventy-five minutes or more and the surface treated at one time is small, averaging less than an inch in diameter. During the entire sitting, the constant service of an attendant is required to maintain the proper pressure on the surface to be treated. These disadvantages still hold against the treatment as employed in the Finsen Institute to-day; but the apparatus has been so improved during the past few years by increasing the size and changing the arrangement of the lenses that the efficiency of the light has been increased about fourfold. A class of cases that previously required an average of 129 treatments are now cured with an average of 29. This reduces the time and expense of the treatment to about one-fourth of that required in the cases reported from the Institute prior to 1901. Furthermore, Professor Finsen and his brother-in-law, Dr. Reyn, have designed a small lamp for the treatment of one patient at a time, in which the principles of the original apparatus are retained. A similar but shorter system of condensers is used, bringing the source of light much nearer the surface to be treated, and by so directing the crater of the arc that most of the powerful rays fall on the collecting lenses of the condenser, the number of amperes required is reduced from eighty to twenty. This lamp has been sufficiently tested, both clinically and in the laboratory, to satisfy Prof. Finsen that it gives results equally as good as those obtained from the larger apparatus. This smaller, convenient and comparatively inexpensive lamp places the treatment within the reach of many physicians who have no occasion to make use of the larger apparatus.* The fact, however, that each application requires the constant attention of a trained assistant for an hour or more, remains a great drawback to the general use of the method, and it is to be hoped that the employment of some mechanical contrivance such as that devised by Broca and Chatin[6], or possibly the use of adrenaline, as suggested by Jamieson and Piffard, may yet enable the patient to receive proper care without occupying the entire time of the attendant.

*The lamp and the technique of its use are described in detail by Finsen and Reyn in Mittheilung aus Finsen's Lysinstitut, IV, 1903, p. 75; and by Graham, *Lancet*, 1903, I, p. 449.

Numerous efforts have been made to invent a lamp, the cost and maintenance of which should be much less than that of Finsen's apparatus, and with which more rapid results could be obtained. In the construction of these lamps two principles chiefly have been utilized. In one class of lamps the electrodes have been made of iron or other metals (in several the spark of an electric condenser has been employed) giving light very rich in the ultraviolet rays. In a second type of lamp the electrodes are of carbon but the source of light is brought much nearer the region to be treated, the system of condensers dispensed with and the amperage reduced to 10 or 12.

Of the second type of lamp, the best-known and most widely used are the Lortet-Genoud lamp and a modification of this by Dr. Sequeira which is known as the London Hospital Lamp. In both, the carbons may be brought within two inches of the surface to be treated, water circulating between two quartz lenses, cutting off the heat rays. The amperage is 10 or 12 and the voltage about 55. In a considerable number of cases, the results of treatment with these lamps have been very satisfactory and obtained more rapidly and with less expense than with the original Finsen apparatus. In a paper[7] read before the Cutaneous Section of the last meeting of the American Medical Association in Saratoga, Dr. Hyde, Dr. Ormsby and I presented the merits of the London Hospital Lamp and stated our belief that it would furnish a fairly satisfactory and cheap substitute for the Finsen lamp. Fifteen minutes' exposure apparently gave the same reaction as an hour's exposure with the original Finsen apparatus. The area treated at one sitting was slightly larger, and the constant attention of an attendant was not necessary, the patient in most instances making the pressure against the lens himself. The first two cases of lupus vulgaris we treated with the lamp made complete recoveries in three months and had remained well a year. Two other cases showed decided improvement. A case of verrucous tuberculosis responded equally well, as did a few cases of lupus erythematosus, rosacea, and alopecia areata. At this time other workers, especially Sequeira and Leredde, reported even a larger number of cases in which this lamp had been successfully used. A longer experience with the lamp, however, has shown us that, while it is unquestionably cheaper and more convenient in every way to operate than the Finsen apparatus, and while it is efficacious in many superficial cases, it has not the penetrating power of the original Finsen lamp, and does not reach effectively the deep-seated nodules of lupus. After leaving Copenhagen I visited the London Hospital, where Dr. Sequeira has charge

of the light institute, in which there are two large Finsen lamps, capable of treating simultaneously four patients each, and a number of the smaller, so-called London Hospital lamps. In a conversation with Dr. Sequeira (who has had a large experience with this lamp) I found that his experience coincided exactly with our own. He uses the smaller lamp for superficial lesions, and, in fact, begins the treatment of most cases with this, as with it he removes the superficial lesions more economically, though he finds it necessary to lengthen each treatment in many cases to one-half hour or one hour. For deep-seated lesions he finds this smaller lamp not effective and resorts to the original Finsen apparatus. The experience of Leredde[1], Morris[3] and others with the Lortet-Genoud lamp and the London Hospital lamp agrees with that of Sequeira and of ourselves.

Of the lamps with iron electrodes, the first was designed by Dr. Bang and was used for a time somewhat extensively in Professor Finsen's institute. This lamp would in four minutes produce seemingly as great a reaction as was usually obtained in an hour by the original Finsen apparatus, and great hopes were entertained for a time, even by Professor Finsen, that an economical and rapid method of photo-therapy had been discovered. The influence of this light, however, is shown to be even more superficial than that of the Lortet-Genoud or the London Hospital lamp.

Many other small lamps of low amperage have been devised, having iron or other metal electrodes, or utilizing the high tension spark of an electric condenser, for the production of a large number of ultraviolet rays. Though some of these lamps have been proven of value in the treatment of superficial conditions, none of them have the penetrating power of the lamps which use a high amperage and have a system of condensers. Larger clinical experience, as well as recent laboratory investigations testify to the truth of Professor Finsen's oft-repeated statement, which he himself has demonstrated both clinically and experimentally, that "it is not light alone, but a large quantity of light which heals lupus." The failure of lamps with iron electrodes is further due to the fact that while the ultraviolet rays are the most highly bactericidal of all, and are most active in producing surface irritation, they are nearly all absorbed by the outermost layers of the epidermis and cannot therefore affect the deeper tissue. The effective light in the treatment of all but the very superficial lesions consists undoubtedly of the visible blue and violet and the immediately adjacent ultraviolet rays.

Laboratory Research. Of numerous experiments to determine the

different penetrating powers of different types of lamps, the three following are of practical value:

Finsen and Jansen tested the penetrating power of the four following lamps: (1) the Finsen lamp (70 amperes, 50 volts); (2) the Finsen-Reyn (20 amperes, 55 volts); (3) the Lortet-Genoud (15 amperes, 50 volts); and (4) the Bang (8 amperes, 35 volts), by placing in front of each from one to four rabbits' ears, on the other side of which was fastened sensitized paper. The average time required by the light from different lamps to penetrate one or more rabbit's ears (exsanguinated by pressure between quartz lenses) and affect the paper is shown in the following table:

	Finsen.	*Finsen-Reyn.*	*Lortet-Genoud.*	*Bang.*
1 rabbit ear	1 sec.	1 sec.	1 sec.	1 min.
2 rabbit ears	5 to 6 sec.	6 to 7 sec.	20 to 25 sec.	5 min.
3 rabbit ears	20 to 22 sec.	20 to 22 sec.	4 to 5 min.	No penetration.
4 rabbit ears	2 to 2.5 min.	2 to 2.5 min.	No penetration.	

Bang[8] prepared two lamps, each with 25 amperes and the same voltage and identical in every way except that one had carbon and the other iron electrodes. He tested the penetrability of the light from the two lamps by using a piece of skin taken from the breast of a twelve-year-old boy and placing back of it sensitized photographic paper. He found that it took the light from the lamp with iron electrodes three times as long to penetrate a piece of skin 1mm. thick as did the light from the lamp with carbon electrodes. The thinner, however, the layer of skin was made, the more evenly the lamps worked. Light from the two lamps penetrated with equal rapidity a section of skin about 0.1mm. thick (obtained with the freezing microtome). He concludes that if in lamps of equal amperage and voltage, the light from iron electrodes is so much less penetrating than that from carbon electrodes, the penetrating power of the Finsen lamp of 80 amperes and a system of condensers must be many times greater than that of the Bang and similar lamps with iron electrodes and low amperage.

In answer to the published statement of some advocates of the smaller lamps that the original Finsen apparatus requires an hour or more to produce a reaction, Busck[9] describes his experiments with two lamps having iron electrodes (the Bang and the Dermolampe), together with the original Finsen apparatus to determine the shortest possible time in which the smallest appreciable reaction could be produced on the skin of his forearm. The larger lamp (70 amperes, condensers, usual distance) required 8 seconds; the Bang lamp (8 amperes, distance 2.5cm.) 10 seconds; the Dermolampe (5 amperes, distance,

3.5cm.) 40 seconds. He calls attention to the fact that the treatment at the Lysinstitut is applied for an hour or more at each sitting, not because it is incapable of producing a superficial reaction in less time but because the prolonged application secures deeper penetration.

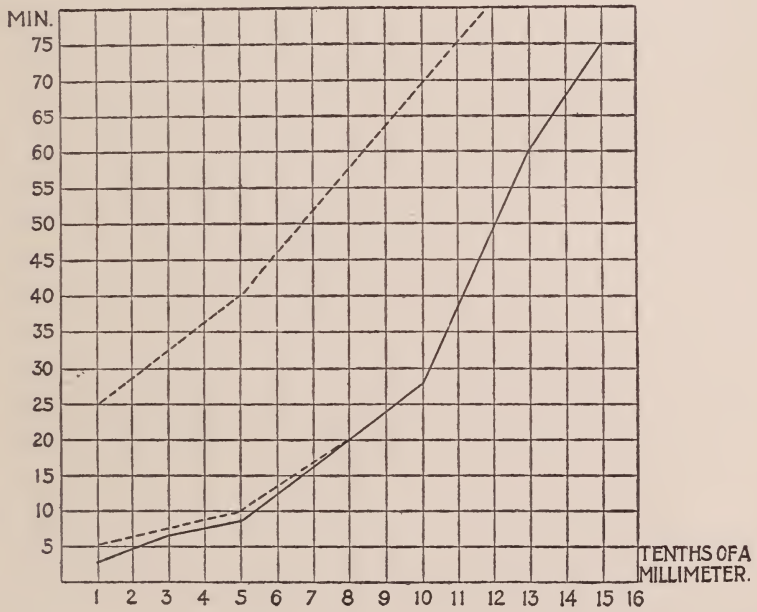
Kromayer suggested that the reason the light from the small lamps with iron electrodes did not penetrate would be found in the fact that the abundance of ultraviolet rays caused so much surface irritation that the application could not be sufficiently prolonged, and tried removing the most refrangible rays by filtering the light through a solution of methylene blue.

Using Kromayer's suggestion, Busck[9] showed that the iron electrodes gave a light having comparatively few blue, violet or ultraviolet rays of longer wave length, and that therefore the light could not be expected to penetrate like that from a lamp with carbon electrodes.

Since Downes and Blunt in 1877 demonstrated the bactericidal properties of light the influence of light upon various micro-organisms has been studied by many observers, and the truth established that concentrated light sufficiently prolonged is capable of destroying the majority of pathogenic bacteria. The resisting power of different micro-organisms, however, differs greatly. Among the recent publications in this field, the following are selected as having a practical bearing on the future development of phototherapy: Finsen[10], Bang[11], Bie[12], Freund[13], Strebel[14] and other investigators have demonstrated repeatedly that of all light waves the ultra-violet have the greatest bactericidal power. In 1896 Finsen demonstrated that condensed electric light would penetrate a man's ear and affect sensitized paper in twenty seconds if the blood be pressed out of the ear, but that without the pressure the same light failed to penetrate the same tissue in five minutes. The power of light and of rays from different parts of the spectrum to penetrate the skin and other animal tissues has since been studied by Finsen,[10] Freund,[13] Bang,[8] Busck,[15], Strebel,[14] Drossbach,[16] Jansen,[17] Leredde[1] and others.

Jansen[17] carried out a series of interesting and carefully controlled experiments to determine the depth to which the rays from different parts of the spectrum could penetrate the skin and destroy bacteria. He used the usual Finsen apparatus, an arc light of 70 amperes and 50 volts with a system of condensers. The tissue used consisted of skin from various parts of the human body, of unpigmented shaven skin from white mice, and guinea-pigs. The micro-organisms tested were 24-hour old bouillon cultures of the bacillus prodigiosus, filtered and diluted four times with water. A drop of

the dilute culture was dried on a slide and covered with the skin to be tested. Every precaution was taken to use tissue as fresh as possible and to exclude the influence of heat on the micro-organisms. To test the effect of the different rays he used constantly the same light and apparatus, but interposed for one series a thin glass to cut off the ultraviolet rays, and for another series a 1% solution of sulphate of quinine which cut off all the ultraviolet and a few of the violet rays. The accompanying table shows the summary of fifty-five controlled experiments.



———— Curve for entire light (wave length 720μ and less).
- - - - - Curve for light from which the outer ultraviolet rays were excluded (wave length, 720μ-322μ).
Top dotted line:—Curve for light from which all the ultraviolet and a few of the violet rays were excluded (wave length, 720μ 406μ).

Through the skin 0.1 mm. thick (measurements of such thin tissue are necessarily approximate) the white light destroyed bacteria only twice as rapidly as light from which the ultraviolet rays had been excluded. Comparing these results with Bang's findings* that

*Unpublished research cited by Jansen.

for surface cultures rays of 220-240 μ wave length are 200 times as bactericidal as rays having wave-lengths of from 320 to 340 μ it is evident that the large majority of short waves were absorbed before penetrating the skin to a depth of 0.1 mm. Through skin 0.3 mm. thick light through the glass was to all practical purposes as effective in the destruction of bacteria as that through quartz.

The light from which all ultraviolet and a few violet rays had been excluded by the use of the quinine sulphate solution, required eight times as long to destroy bacteria at a depth of 0.1 mm., four times as long at a depth of 0.5 mm., and more than twice as long at a depth of 1 mm., showing that as far as they penetrate, the longer ultraviolet rays are more highly bactericidal than the visible blue and violet rays. Jansen concludes from his experiments that the concentrated electric light, as ordinarily employed at the Lysinstitut for an hour and a quarter, will penetrate the skin with bactericidal power to a depth of 1.5 mm., and with a retarding influence upon the growth of bacteria to a depth of not more than 4 mm. He finds that the effective bactericidal rays are the inner ultraviolet (from 406-322 μ) and the visible blue and violet rays, and that the outer ultraviolet rays can have no influence on bacteria in the skin.*

Concentrated electric light has been used apparently with success by Boeder† to destroy cultures of streptococci and staphylococci injected into the ear of a rabbit; and by Nagelschmidt[18] to kill tubercle bacilli in artificially produced tuberculosis of the skin in guinea-pigs.

The penetration of deeper tissues of the human body with sufficient light to affect photographic plates is reported by Solucha,‡ (electric light through the neck); Kime and Hortatler‡ (sunlight through the thorax); Gottheil[19] (electric light through abdomen); and Busck[15] (electric light through wrist and hand). The conclusions drawn by some of these observers that because light will affect photographic plates through the entire thickness of the body, therefore light must exert some influence on the conditions of deep-seated organs, is obviously erroneous. Yellow and even red rays both of

*J. von Sachs demonstrated in 1887 that the effective rays in determining the heliotrophism of plants were the visible blue and violet rays. He also excluded the ultraviolet rays with a quinine solution.

†Cited by Jansen.

‡Cited by Freund.

which have great penetrating power, may influence photographic plates, while all experiments with both plant and animal tissue show that the rays which influence cell activity are in the blue, violet and ultraviolet fields of the spectrum. In this connection it is interesting to note the experiments of Busck[15] who found that with a given source of light, the red, orange, and yellow rays (all others being excluded) would penetrate his hand and affect a sensitized plate in five seconds. The blue, violet, and ultraviolet rays (all others being excluded) from the same source of light and under the same conditions, failed to affect the plate in ten minutes. In a series of experiments in which he tested the power of different rays to penetrate a rabbit's ear, from which the blood had not been expressed, and in which he tested the penetration of the red and ultrared rays with a thermometer; of the yellow rays with Larsen's photometer;[20] and the violet end of the spectrum with photographic plates, he found that the penetrating power was practically nothing for the outer ultraviolet rays and gradually increased with the length of the waves to a point in the ultrared part of the spectrum, when it again gradually decreased. The ear was penetrated by none of the ultraviolet, by about 1 per cent. of the blue and violet, 22 per cent. of the red-yellow, 28 per cent. of the inner ultrared, and from 23 per cent. to 5 per cent. of the outer ultrared rays.

The conclusions to be drawn from these experiments and from the reports of other workers in this field are that practically none of the outer ultraviolet rays penetrate the epidermis to a depth of more than one millimetre and that the effective rays in the treatment of cutaneous diseases are the visible blue and violet together with some of the inner ultraviolet rays.

Pathology: The histological changes produced in the skin, both normal and pathological, by treatment with condensed light have been studied by Möller,[21] Sack,[22] MacLeod,[23] Schmidt and Marcuse[24], Leredde[1], Glebowski and others. The essential feature is the inflammatory reaction in varying degrees and its effect on pathological tissue. Sack states that the first changes are seen in swelling and proliferation of the endothelial cells of the blood vessels. Pathologically altered cells undergo regressive changes and disappear. Unaltered cells, especially connective-tissue cells, are stimulated to greater activity. Those cells but slightly affected by disease may be restored to a normal condition. The late appearance of the reaction and the absence of coagulation necrosis show that the effect is not that of burning or of cauterization. Normal tissue is not destroyed by the

light but pathological cells are replaced by a uniform new growth of connective tissue. This conservation of normal tissue and the even and general distribution of the new connective tissue accounts for the inconspicuous scars obtained by the treatment.

Though light produces no destructive action on normal skin, Finsen and his co-workers have called attention to the fact that for six months after a strong reaction has been produced, there may remain a dilatation of the superficial vessels, causing a latent hyperæmia which becomes visible as a result of the slightest irritation of the surface.

The effective action of light on tissue apparently depends on its stimulation of the cutaneous circulation and on the histological changes produced, though Jansen's and other experiments would indicate that to a depth of from 1 to 3 mm. the light may also destroy or retard the growth of bacteria. It is possible, as suggested by Strebel, that in the tissue the light rays are transformed into some other form of energy, probably electrical.

The Red Light Treatment of Smallpox: Finsen's treatment of smallpox by the exclusion of the actinic rays of light has received comparatively little attention during the recent epidemics of this disease. In 1900 about 150 cases had been treated successfully by this method and since that time there have been recorded other cases. A number of observers, however, have reported that the treatment has failed in their hands. Professor Finsen believes that failure means imperfect technique. To secure the best results the patient should be brought under the treatment before the fifth day of the disease, and the actinic rays completely excluded. As a control experiment, he hangs a number of photographers' sensitized plates in the room with the patient. If at the end of a number of days these plates show any effects of white light, the treatment has been defective. This test is simple and easily applied, and moreover a method that has in a large number of cases apparently prevented suppuration, secondary fever and subsequent scarring, and seemingly shortened the course of the disease, is certainly worthy of a thorough trial by everyone who has occasion to treat smallpox.

General considerations and conclusions: Of all known methods of treating lupus vulgaris and other forms of cutaneous tuberculosis, phototherapy is the most certain in its action and gives the best cosmetic results. Equally good results are obtained in some cases by radiotherapy, or by Lang's method, but neither of these methods can be depended upon to give quite such inconspicuous scars as are obtained by phototherapy. In cases treated by the X-rays, in which pro-

nounced reaction has been obtained the scars sometimes contain distinct telangiectases.

Phototherapy is not so effective, however, and may fail entirely in cases in which the skin is deeply pigmented or in which there are mechanical obstacles to the treatment, such as thick or irregular scars, densely infiltrated or hypertrophic areas, or when the disease is so situated, as is usually the case on a mucous membrane, as to be inaccessible to pressure and direct radiation. In this class of cases, the X-rays are more effective. Crusts and other obstacles to the penetration of light should be removed by the usual methods. In some instances pyrogallol and other remedies may be used to lay bare the deeper nodules before applying the light.

The expense of the light treatment for small areas is no greater than that of other methods, and the results are as rapidly achieved. For larger areas, however, the method as now applied is expensive and as a rule probably requires more time than does treatment with the X-rays. Jansen's experiments show that to all practical purposes in the treatment of lupus, the bactericidal properties of light are as great through glass as through quartz. As the outer ultraviolet rays that are excluded by glass fail also to penetrate the skin, it is possible that some form of glass lenses will be found equally effective with those of quartz in treating all but surface lesions. When the quartz is replaced by a material from which a larger lens may be made, larger areas may be treated at one time.*

Aside from cutaneous tuberculosis, phototherapy promises to be exceedingly valuable in the treatment of lupus erythematosus, alopecia areata, rosacea, vascular nævi and some chronic inflammatory cutaneous diseases in circumscribed areas. In other cutaneous diseases, the light treatment has not yet been demonstrated to have any advantage over older and less expensive methods.

Attempts have been made to treat pulmonary tuberculosis and other systemic diseases with powerful arc lights. The results so far reported are not sufficiently definite to be of much value. It is very improbable that light rays as such have any direct action on organs or tissues situated much below the skin. It is probably true that some systemic conditions may be influenced by the action of light from powerful arc lamps in improving the nutrition of the skin and stimulating it to greater functional activity. It is possible that light rays

*The "Actinolite" is a machine made in New York apparently on the same principles as the Finsen-Reyn lamp, except that the manufacturers use, instead of quartz, a new form of glass, which they claim permits the free passage of the ultraviolet rays.

may have some influence on the blood circulating in the skin, or on nerve endings, or finally, as suggested by Strebel, light rays after penetrating tissue may be changed into some other form of energy.

BIBLIOGRAPHY.

1. Leredde et Pautrier, Ann. de Derm., 1902, t. iii, p. 341; and Photothérapie et Photobiologie (monograph of 267 pp.) Paris, 1903.
2. Gustou, Baudouin et Chatin, Ann. de Derm., 1903, t. iii, p. 327.
3. Morris and Dore, The Practitioner, April, 1903.
4. Forchhammer, VII Congress der Deutschen Derm. Gesellschaft., 1901.
5. Jersild, Mitteilung aus Finsen's Lysinstitut, I, 1899.
6. Broca et Chatin, Dauphiné médical, April, 1902.
7. Hyde, Montgomery and Ormsby, Jour. Am. Med. Assn., Jan. 3, 1903.
8. Bang, Deutsche med. Wchnschr., 1902, p. 35.
9. Busck, Derm. Zeitschr., 1903, Bd. X, p. 178.
10. Finsen, "Ueber die Anwendung von Concentrirten chemischen Lichtstrahlen in der Medicin," Leipzig, 1899.
11. Bang, Mitteilung aus Finsen's Lysinstitut, II, 1901; ibid. III, 1903.
12. Bie, Mitteilung aus Finsen's Lysinstitut, I, 1899.
13. Freund, Grundriss der Gesammten Radiotherapie (monograph of 423 pp.) Berlin and Vienna, 1903.
14. Strebel, Deutsche med. Wchnschr., 1901, Nos. 5 and 6.
15. Busck, Mitteilung aus Finsen's Lysinstitut, IV, 1903.
16. Drossbach, Deutsche med. Wchnschr., Sept. 21, 1901.
17. Jansen, Mitteilung aus Finsen's Lysinstitut, IV, 1903.
18. Nagelschmidt, Arch. f. Derm., 1902, Bd. 63, p. 335.
19. Gottheil, Med. Rec., N. Y., April 19, 1902, p. 609.
20. Larsen, Mitteilung aus Finsen's Lysinstitut, II, 1901.
21. Möller, Bibliotheca medica, Abt. DII (monograph of 142 pp.)
22. Sack, Münch. med. Wchnschr., July 8, 1902.
23. MacLeod, Brit. Med. Jour., Oct. 25, 1902.
24. Schmidt und Marcuse, Arch. f. Derm., 1903, Bd. 64, p. 323.

DISCUSSION.

Dr. George Thomas Jackson was glad to hear this paper, as he was considerably interested in phototherapy, having employed the treatment during the past year at the Presbyterian Hospital. He had with him one of the iron lamps devised by Dr. Piffard. It was a spark light very rich in ultraviolet rays. It was used either with the static machine or the high frequency current. Before using this lamp, Dr. Piffard recommended the application of a 1-1,000 solution of adrenalin extract to the skin by cataphoresis, in order to deprive the tissues of blood. This procedure rendered the tissues absolutely bloodless for a time, and did away with the necessity of great pressure against the skin during the application of the lamp.

At the Presbyterian Hospital he had used the so-called London lamp during the past year. In two cases of lupus erythematosus where the lamp was used on one side of the face and the patch on the other side was painted with tincture of iodine, at the same time giving quinine by the mouth, the latter got well while the former failed to improve. In another case of lupus erythematosus with patches under both eyes, the London lamp was used on the right side and it apparently aggravated the lesion. On the other side the high frequency current was used, and under this treatment the patch broke up into three small islands and seemed to improve.

He also treated three cases of lupus vulgaris with the London lamp. They were old cases that had been treated by various methods and there was so much cicatricial tissue present that the light failed to produce any effect. There were also three cases of superficial epithelioma in which the light was used, apparently with good effect. In one of the cases, the lesion, of perhaps six months standing, entirely disappeared after three exposures to the light, leaving only a narrow seam of redness. He was surprised at this result, as he was a little skeptical about the power of the lamp in these cases. In another case of epithelioma that cleared up a good deal under the treatment, the patient discontinued treatment before its final disappearance. They had another case under treatment in which the very first application of the light produced a marked improvement.

There was no fast rule as to the length of the exposure. Sometimes a five minutes' exposure gave rise to an intense dermatitis, while in another there might be no reaction even after an exposure of twenty-five minutes.

Dr. Stelwagon said that three years ago he had the pleasure of visiting the Finsen Institute at Copenhagen, and felt sure that no one can go there without being impressed with the character of the work done, and the favorable results obtained. The objections were the

expense of the apparatus and the long duration of the treatment. The exposures lasted from an hour to an hour and a quarter daily, and were continued for months, sometimes even for a year. On that account, the method would have very little application in this country.

While there he purchased a sunlight apparatus and never until then did he appreciate how very little sunlight we had in this country.

As to the rôle of the ultraviolet rays, he questioned whether the good results of the treatment depend on them alone. In the sunlight lens, Finsen did not use the rock crystal, and yet his results were almost as good as with the present arc lamp. In some of his compressing lenses, ordinary glass was used: in others, rock crystal. While we may conclude that the ultraviolet rays have a great deal to do with the results, there were other factors as well.

As to the new apparatus Dr. Jackson had shown, he had one and it was certainly very impressive. The racket it made was something awful. He had applied the adrenalin by cataphoresis, as described by Dr. Piffard, and he believed that a great deal of the reaction which subsequently occurred was due to the effect of the galvanic current, and not to the light. In some of his cases he had produced a mild erythema in twenty-five minutes, but believed the curative properties of the apparatus were extremely limited.

As to the value of the light treatment in alopecia areata, he was extremely doubtful regarding it. If we took a certain number of cases of alopecia and applied various other established methods of treatment, a great many of them would get well just as quickly as by the use of the rays.

Dr. Gilchrist said that they had bought one of the original Finsen lamps about four years ago, but did not get very good results from it. They did not have sufficient sunlight. In the summer usually there was a good deal of sunlight in Baltimore, but that particular summer it was very rare. The London Hospital apparatus he saw two years ago, and had been using it for the last year and a half. There was comparatively little lupus in this country. The hygienic conditions and sanitary arrangements here were such that the disease was comparatively rare. In Dr. Brooke's clinic at Manchester, England, last summer he had seen about sixty cases of lupus being treated every day chiefly by the large Finsen apparatus.

With reference to the large Finsen light in the London Hospital, it cost about ten thousand dollars to put it up. In this machine an enormous quantity of light was wasted. This was obviated with the smaller lamps, and they should accomplish just as good and even better results. In order to bring out the true action of the Finsen light on tubercle bacilli, it would be a good idea to inoculate a series of guinea-pigs under the skin with tubercle bacilli, and watch the effect of the rays at var-

ious intervals upon them, and thus find out how many exposures were necessary to kill the bacilli.

With reference to the application of adrenalin in order to produce local anemia, he had done this in connection with both the Finsen light and the X-rays. The skin became white and remained so for fifteen or twenty minutes. The strength of the solution employed was 1-5,000.

Dr. Pusey was somewhat surprised to hear the statement made that there was still some doubt as to the bactericidal properties of light. It seemed to him that our evidence was conclusive on that point. One of the most reliable investigations on this subject had shown that the most highly bactericidal rays did not always correspond with the most highly actinic rays; that for some of the pathogenic bacteria there were rays about the middle of the spectrum, far to the left of the field, which were most highly bactericidal. That supported the opinion that it was not the ultraviolet rays alone, which were to be relied upon in the treatment of these cases. He had been interested in comparing the effects of phototherapy and radiotherapy, and it seemed to him that there were one or two conditions in which the former was preferable. He believed that the field of usefulness for phototherapy was in the treatment of flat nævi and in conditions where it was desirable to produce an inflammatory reaction without danger. It was a safer means to use, and in those cases the reaction must be carried to a pretty severe point, and for that purpose the Finsen light was safer than the X-ray.

Dr. Bronson said that it was a matter of importance to determine what was the effective agent in phototherapy. The opinion seemed rather prevalent that in the Finsen light and in the various other lamps it was solely the ultraviolet rays which were efficient. But nothing had been more conclusively established than that it was not the ultraviolet rays alone or chiefly, but the chemical rays, the blue-violet, and only a small part of the ultraviolet rays which were effective. Freund, by making a division of the ultraviolet rays of the spectrum, ascertained that only a third of them were capable of penetrating the epidermis. Two-thirds were absorbed. This seemed to explain the great success with the original Finsen apparatus over other lamps, such as those of Bang, Gurl, London Hospital, and Piffard. Finsen had demonstrated by experiments with rabbits' ears that there was a great disparity in the penetrability of rays from these various lamps. The Bang and even the Lortet-Genoud were shown to be much inferior to both the original Finsen and the Finsen-Rehn lamp. Allusion had been made to Dr. Piffard's suggestion of using adrenalin in order to produce ischæmia of the skin. That suggestion was not original with Dr. Piffard, but was first made by Jamieson or by Beurmann.

To Dr. Piffard belonged the credit, however, of first using it in connection with cataphoresis. The recommendation ought to be taken

with some caution, however, as adrenalin sometimes causes injury to the blood vessels and used in connection with phototherapy might possibly produce complex and injurious effects.

Dr. H. Goldenberg: Dr. Gilchrist suggested testing the effect of the rays upon tubercle bacilli injected underneath the skin of rabbits. Such experiments had already been made by Nagelschmidt, one of Lesser's assistants, who in a paper read before the "Berliner Dermatologische Gesellschaft" gave a detailed account of his experiments.

Dr. Grover W. Wende said that recently they had quite an epidemic of erysipelas, and in order to test the value of red light treatment in the disease, he selected twenty-five cases and treated one-half of them by this method and the other half by the older methods. The red light, apparently, did not influence the course of the disease, although the technique as suggested by Dr. Finsen was not carried out in using a perfectly dark room.

Dr. F. H. Montgomery (Closing the discussion): Dr. Piffard's was certainly a most ingenious and convenient lamp, but, like the other lamps based on this principle, we could not expect it to have more than a very superficial influence. The Bang lamp was still used occasionally in Copenhagen where only a very superficial influence was desired. The sunlight was no longer used by Professor Finsen, not only because its utilization depends upon the state of the weather, but because the electric light was much more effective. He was obliged to Dr. Bronson for detailing some of the experiments showing the penetrating power of the original Finsen light as compared with the light from the smaller lamps. He did not have time to read these details in presenting his paper.

There was considerable misunderstanding regarding the time required to produce a superficial erythema with the Finsen apparatus. One of Finsen's assistants, in a recent article, stated that the shortest time in which an appreciable erythema could be produced on the thin skin of the forearm was eight seconds less time than was required by the Bang, and Lortet-Genoud lamps. The reason for giving a longer *seance* was to obtain deep penetration of the light. The important factor in the light employed by Finsen was the condensing of a large amount of rays in a small area. As Dr. Goldenberg had said, tests similar to those suggested by Dr. Gilchrist had already been made by an assistant in Dr. Lesser's clinic and the results recorded in a recent number of the Archiv.

PLATE XLVI.—To Illustrate Dr. Jno. A. Fordyce's Article.



Fig. 1.



Fig. 2.

A CASE OF UNDETERMINED INFECTION OF THE SKIN: POSSIBLY GLANDERS.

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Read before the twenty-seventh annual meeting of the American Dermatological Association, Washington, D. C., May 12, 13 and 14, 1903.

THE patient, a man fifty-two years old, a native of Holland, was admitted to the City Hospital March 11, 1903. He was a cigar-maker by occupation. He was excessively addicted to the use of tobacco but drank very moderately. He denied any venereal infection.

Five years ago he suffered from malaria, and three years later from grippe and pneumonia; since then he has had a slight cough at times, and has lost some weight.

He did not own a horse nor had he recently handled horses, but he sometimes waited in a stable near the cigar factory where he was employed, if he arrived before the factory opened.

Present Illness: Three weeks before his admission to the hospital while removing ashes from the stove at his home he received a slight scratch over the dorsal aspect of the second phalangeal joint of the ring finger of the right hand. The scratch became very painful and within a few days developed into a running sore. His wife stated that the sore had an elevated margin with a depressed black center, and that it was in all respects similar to the sores which subsequently developed on other parts of the body. He frequently rubbed his right hand over his moustache and head where secondary lesions similar or identical with the original sore appeared within two or three days thereafter.

During the time which elapsed from the appearance of the sore on his finger to the date of admission to the hospital the eruption had involved his upper lip, the right ear, the scalp and other localities to which reference will be made. He was confined to his bed and complained of weakness, chilly sensations and headache.

Condition when admitted to the hospital: When he entered the hospital his temperature was 99.4° F., his pulse 84, and his respiration 20. He appeared more seriously ill than his pulse and temper-

ature indicated. He was excessively weak, nervous and apprehensive. His hands trembled when extended but stopped when given support. He was fairly nourished but with a sallow skin. The primary lesion on the ring finger appeared as a deep, circular, fairly clean-cut ulcer, about the size of a cherry, without redness of the surrounding skin or evidence of cellulitis other than a slight œdema (Fig. 1). It discharged a moderate amount of yellowish purulent material. The base of the ulcer, which reached almost to the bone, was somewhat irregular and suggested the appearance of a chancroid.

There was an irregular confluent erosion of the skin of the upper lip extending to the angle of the mouth, and outward to the cheek for the distance of an inch (Fig. 2). It was covered by a firmly adherent yellowish brown crust beneath which the nature of the lesion could be seen. The mucous surfaces of the lips, the soft palate, and the nose were the seat of numerous superficial pea-sized erosions which could readily be explained by a direct extension of the infectious agent from lesions about the orifices. A sero-purulent discharge with fetid odor from the nostrils was present and persisted with intermissions until the patient's death. On the parietal and occipital regions of the scalp there were half-a-dozen irregularly rounded patches, about one inch in diameter, covered with dark brown or black crusts, which were firmly adherent and beneath which little or no purulent discharge could be pressed. On the anterior surface of the right ear, at the junction of the helix and the lobe, there was an ulcerated area three-quarters of an inch in diameter with undermined edges and purulent sloughing base. (Fig. 2). An ulcerated surface of identical appearance was found on the most dependent part of the scrotum, with secondary lesions on the skin of the thigh where the scrotal ulcer came in contact with the parts.

With the exception of a few scattered ulcers which presented no exceptional features, no other eruption was present at the time of the patient's admission. The development of new lesions about the old ones or where the discharge could be conveyed by the fingers, or in other ways, was carefully observed during the lifetime of the patient. The encrusted ulcers which were present on admission enlarged by the development of a ring of vesico-pustules, beneath which the skin became gangrenous throughout its entire thickness, thus adding to the circumference of the patch. Numerous secondary lesions appeared about the larger patches and elsewhere, which at first contained turbid serum. The contents of the vesicles soon became dark from the

admixture of blood following which necrosis extending through the entire thickness of the skin took place. The lesion at the same time enlarged at the periphery and became encrusted. With the separation or removal of the crusts rather sharply defined punched-out ulcers were left which showed little or no disposition to heal (Fig. 1.) The spread of the eruption by auto-inoculation from the original sore on the finger to the face and scalp, and from the scrotal ulcers to the thigh was very evident. There was nothing in the appearance of the eruption to lead us to believe that infection through the lymphatics was present nor that a general infection preceded the local outbreak. Cultures from recent and unruptured vesicles on various media during the patient's life developed nothing but a growth of staphylococcus pyogenes aureus. No bacilli of any kind were found.

The nurses, attendants and all who came in contact with the patient were strongly impressed with the necessity of using extreme care in handling the dressings and discharges in order to prevent possible spread of the disease from the infected individual.

The progress of the case from day to day was noted by the house surgeon as follows:

March 12.—Temp. ranged from 98.6 to 99.8 degrees. Pulse, 78-86. Resp. 18-20. Patient put on light diet and 3 comp. cathartic pills given. Moustache and head shaved, wet bichloride dressing to finger, face and scalp. About this time a fresh lesion appeared on the central portion of ridge of nose. This lesion was of circular outline, about the size of a large split pea, raised like a blister and of a sallow waxy color. General condition about the same. Mouth wash and nose spray of peroxide and water *aa*.

March 13.—Temp. ranged between 99 and 100 degrees. Pulse, 80-100. Resp. 18-20. Normal movement from bowels. Lesion on nose now had a depressed center. Scab on scrotum and ear removed, leaving ulcers in the subcutaneous tissues. Nose was so obstructed that breathing was difficult. Lesions about mouth growing deeper, also those on left thigh.

March 14.—Temp. ranged between 98.8 and 101.8 degrees. Pulse 84-104. Resp. 20-24. The lesion on nose now had a black, depressed base and a raised waxy border, and was of perceptibly greater diameter than on the previous day. Patient quite nervous and often shivered with chills.

March 15.—Temp. 98 to 101.4 degrees. Pulse, 92-110. Resp. 20. Patient perceptibly worse each day. The pulse from the first

has been of small volume and low tension, and heart sounds weak. Patient complained of feeling very weak. Strychnine gr. 1-30 and whiskey were given. Later nutrient enema given and retained. A creamy discharge colored slightly with admixed blood now began from the nose; this had a very fetid sweetish odor.

March 16.—Temp. ranged between 98.6 and 101 degrees. Pulse, 96-108. Resp. 13-24. Urine 1029, alk., cloudy amber, white sediment, small amount of albumin. Diazo reaction present. Blood examination showed 5,200,000 red blood corpuscles, 15,000 white blood corpuscles, 100 per cent. hæmoglobin and a differential count showed polynuclear leucocytes 78.4 per cent.; lymphocytes, 18.8 per cent.; eosinophiles, 1 per cent.; transitional, 1.8 per cent. Blood cultures showed nothing but a few staphylococcus aureus organisms.

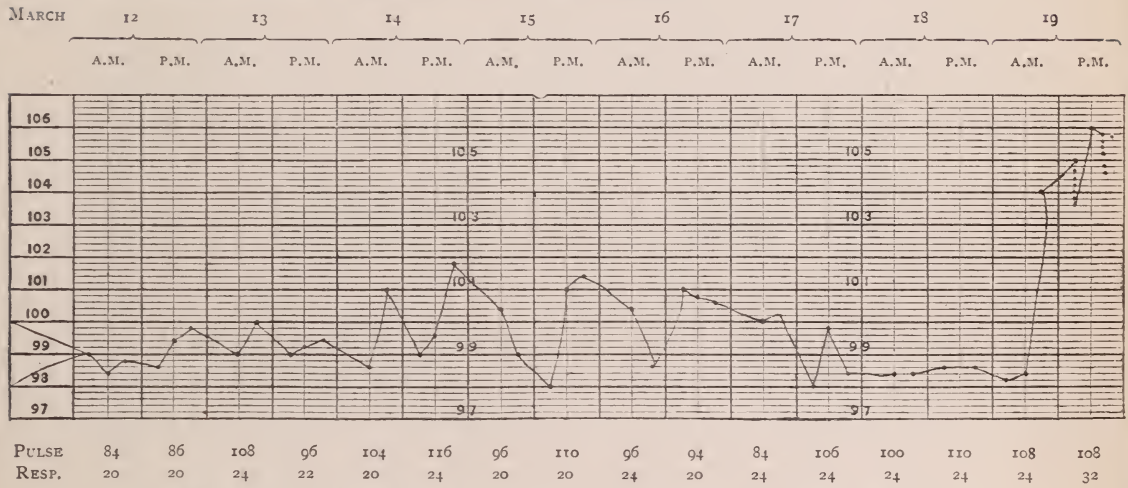
March 17.—Within 24 hours about fifty vesico-pustules appeared over the scalp, varying in diameter from a quarter to a half an inch; these were of a yellowish waxy hue; the epidermis covering was friable and the interior seemed to consist of a spongy moist material, which showed leucocytes and many staphylococci. About this time many other new lesions appeared; one an inch in diameter on the pubic region. This had an accumulation of thin serum under the horny layer which ruptured and left a wrinkled epidermal covering over the deeper layers of the skin into which hæmorrhages had occurred which showed through as a deep red color. The skin for an inch outside the lesion showed considerable elevation and slight reddening. Two or three similar lesions appeared on the inner side of left thigh, diameter three-quarters of an inch; four or five on outside of buttocks and upper outer aspect of left thigh, diameter half to three-quarters inch; one on middle of right thigh outer aspect, and one on upper outer aspect, diameter 1 inch; also a large oval lesion over outer end of right clavicle, one and one-half by three-quarters of an inch; and three or four on either side of neck; and two or three on back of neck. On left cheek, from angle of mouth outward for two inches and downward over ramus of jaw for two inches there is an area the size of one's hand in which lesions the size of a cherry developed which soon became confluent and afterwards were covered with a dark brown scab.

The older lesions about the mouth, nose and scalp progressed very fast and extended deeper. On the ring finger near the initial lesion a vesicle of half-inch diameter appeared and the deep initial ulcer spread laterally and some cellulitis was seen.

Patient very thirsty and complained of chills. Temp. 98 to 100.2

degrees. Pulse, 84-118. Resp. 20-24. Had headache, back-ache and was drowsy; no complaint of pain. Wanted to be let alone.

March 18.—Temp. about normal. Pulse, 98-108. Resp. 22-24. Patient weaker and quite tremulous; reclined or tried to sit up in bed most of the time. All the lesions became rapidly larger. Loose yellow stool occurred. Mind clear. Slight cough.



March 19.—Temp. 98.4 degrees to 106 degrees. Pulse, 98-116. Resp. 26-50. Diarrhœa began; labored rapid respiration, weak pulse and collapse.

Temperature rose abruptly to 104 degrees about 7 a.m., and continued between 104-106 degrees despite alcohol sponges, until he died at 10 p. m., March 19, 1903. All the lesions at the time of death were larger than in last description, and especially those on the upper thighs. The one on right thigh, outer and upper aspect, was as large as a hen's egg, 2½ inches in longest diameter and nearly circular; the epidermis was rubbed off and left a hæmorrhagic base.

Autopsy Report.—Autopsy by Coroner, March 20, 1903, 4 P. M.

Right lung adherent anteriorly. Both lungs intensely congested, showing beginning pneumonia; some œdema.

Hearts: Some thickening of valves, otherwise normal.

Peri-bronchial lymph nodes enlarged, also *lymph glands* in mesentery were enlarged to size of large pea.

On the anterior surface of *epiglottis* and the fold between it and the tongue was a superficial ulcer about one inch in diameter. The

entire *larynx* was a superficial ulcer, and covered with a yellowish slimy pus.

Kidneys showed anæmic areas in patches, giving rise to a mottled appearance.

Stomach and *intestines* opened but only a few petechial spots were seen in small intestines.

The results of Dr. Mewborn's bacteriological examination and inoculation experiments from material obtained during the life of the patient, and at the autopsy, are given in the following report:

Saturday, March 14.—Smears made on slides with pus taken from bullæ as well as from ulcer on finger showed when stained (with polychrome blue, toluidine and carbolized thionine) staphylococci, streptococci, and a slender, irregularly staining bacillus. These bacilli were not very numerous.

March 15.—Two male guinea-pigs, the larger weighing 17 ounces, the smaller 15 ounces, were inoculated at the City Hospital. By means of a sterile Pasteur pipette about one cubic centimeter of distilled water was mingled with the purulent contents of an ulcer on the face and with it some of the purulent discharge from the nose was inoculated directly into the peritoneal cavity of the larger guinea-pig. The skin at the site of the inoculation having been previously plucked free of hair and sterilized with a sublimate solution. After inoculation a collodion dressing was applied.

The smaller pig was inoculated sub-cutaneously in the thigh of the left hind-leg with scrapings taken from the ulcers of the face mingled with distilled water in pipette as above described.

March 21.—Since inoculation (six days) pigs have remained apparently well except for a daily rise of temperature of from one and a half to two degrees above normal. Slight inflammatory reaction around the site of the inoculation in the smaller pig; no sign of inflammation in testicles of either pig.

March 21.—Pus and scrapings from autopsy specimens taken from ulcerations in the larynx and from a deep ulcer situated between the base of tongue and the epiglottis were inoculated into the peritoneal cavity of the larger guinea-pig. Quite a severe local inflammatory reaction followed at the site of inoculation, the temperature ran as high as 103 degrees F. An abscess containing about thirty cubic centimeters of thick pus was evacuated on the seventh day. There was nothing in this pus which on microscopical examination looked

like a blastomyces or a glanders bacillus. Cultures on glucose agar gave only staphylococcus aureus and albus. At present time (May 5th) the two pigs have good appetites, have each gained an ounce in weight and show no signs of the sarcocele of glanders.

Larynx and trachea.—As shown in the photograph (photograph not reproduced) there were numerous shallow ulcerations on the epiglottis, in the larynx and trachea. There was a thick granular purulent material covering these ulcerations. At the base of the epiglottis, on the anterior surface, was a rough, rather deep ulceration about 2 centimeters in diameter.

A section of ulcerated mucous membrane removed from near arytenoid after staining by carbolized thionine (method of Kühne) gave numerous staphylococci and streptococci and a few slender bacilli easily decolorized by absolute alcohol but not staining irregularly.

The cultures made from sero-purulent contents of bullæ, from ulcers of face and from ulcers of larynx made post mortem and grown on potato and glucose agar, showed, in almost all, staphylococcus aureus and albus. In one culture on potato, inoculated with scrapings from laryngeal ulcers, a thick bacillus with rounded ends taking the Gram stain was found. This growth on potato was of a dirty white, scanty and showed no tendency to become chocolate-colored in aging. The bacillus violaceous was found in one culture from the larynx, but could only be considered as a contamination.

Dr. J. E. Welsh of the Carnegie Laboratory kindly furnished the following report from material obtained at the autopsy:

"With blood taken from the right auricle I made four agar plates and inoculated two tubes of broth. I did not succeed in obtaining the glanders bacillus from the blood. I also made cultures from the mediastinal and mesenteric lymph nodes with negative results. Sections of the tissues were made and stained with a view to demonstrating micro-organisms. The following is a brief summary of the findings.

"*Ulcer on Scalp:* Staphylococci in abundance; short chains of streptococci and diplococci.

"*Mesenteric Lymph Node:* Congestion.

Ulcer in Larynx: Staphylococci, streptococci and diplococci.

"*Heart:* Extensive brown atrophy.

"*Lungs:* Congestion, interstitial pneumonia.

"*Mediastinal Lymph Gland:* Congestion.

"*Liver*: Brown atrophy; perihepatitis; beginning cirrhosis.

"*Spleen*: Congestion.

"*Ulcer on Finger*: Dense round cell infiltration; large and small clumps of bacilli and scattered bacilli which penetrate about two-thirds of the zone of round cells. The bacilli are for the most part somewhat larger than tubercle bacilli, they stain somewhat unevenly and have rounded extremities.

"I did not make a culture from the tissue about the primary ulcer on the finger which shows these bacilli, consequently without knowing their biological characteristics I cannot classify them for you. I am sorry I did not get this culture for you. It seems in the absence of more definite information concerning these bacilli you will have to make your diagnosis from the clinical aspect of the case."

We are indebted to Dr. A. E. Thayer, of the Cornell University Medical School, for the result of his investigations. He inoculated the following culture media with fluid from sections of the lung and from the fibrino-purulent exudate in the trachea:

Slant agar (glycerine 5 per cent.);
Slant Serum (plate from this);
Potato twice (plate from this);
Agar plate, 2d plate from this;
Smear, no certainly characteristic forms.

He found a short, rather stout bacillus, with rounded ends, with occasional polar and beaded staining, which grew best on serum. On this it formed a whitish streak, surface moist and glistening, edges slightly raised and marked by round projections. No characteristic growth on potato.

Bacilli did not form spores; stained best with Löffler's methylene-blue.

The histological examination which was carefully made by Dr. Elizabeth C. Jagle, assistant in the Dermatological laboratory at the University and Bellevue Hospital Medical College, gave the following result:

REPORT ON THE HISTOLOGICAL FINDINGS IN A SUSPECTED CASE OF GLANDERS.

Tissues examined were a piece of skin removed with punch from thigh during life, and a piece from scrotum and original focus on finger obtained at autopsy.

Embedded in celloidin and paraffin and stained for bacillus mallei by following methods:

Löffler's and Schütz's methylene-blue;

Carbol-fuchsin, with and without heat;
Nicolle's thionin-blue;
Thionin-blue with ammonia-molybdate.
Results negative, no bacillus of any kind being found.

A number of sections stained with methylene-blue and eosin and with hematoxylin were examined for blastomyces, which diligent search failed to reveal.

With Gram all the tissues showed myriads of cocci, varying in size, single and grouped, with no tendency to chain formation. They were especially numerous in the superficial necrotic areas, but colonies and single organisms were also found in the deeper portions of the cutis.

Stained with hematoxylin and eosin and hematoxylin and orange G, histology is as follows:

(*a*) *From thigh:* Serial sections; in those from end of lesion the horny layer was somewhat increased, the granular layer had disappeared and the prickle-cell layer showed quite a marked overgrowth and contained numerous small abscesses. The epidermis as a whole was lifted from the cutis, and latter showed hyalin degeneration and dense infiltration with lymphocytes and polynuclear leucocytes; the fibroblasts were much distorted and fragmented nuclei were scattered throughout.

From center of the lesion the sections showed in the middle an ulceration extending down in the cutis and on either side small abscesses between the latter and epithelial pegs. Acanthosis was slight and changes in the corium were the same as the preceding. Staphylococci very numerous.

(*b*) *From original focus:* Here the ulceration extended through the entire cutis and the shreds of necrotic tissue contained numberless polymorphic cocci. The contiguous portion showed the horny layer as well as the granular layer increased in thickness, the cells of the latter being densely packed with granules. The rete pegs were increased in breadth and more so in length, with little abscess formation. The corium was the seat of an acute exudative inflammation; the vessels were enormously dilated and there was evidence of hemolysis. The infiltration was dense, uniformly distributed near ulcerated area and perivascularly arranged toward periphery of lesion, with a preponderance of lymphocytes.

(*c*) *From scrotum:* Superficial tissue for some distance into the cutis was necrosed and contained a great many staphylococci. Below

this the collagen had undergone hyalin degeneration and the other changes were those of an acute exudative inflammation, with markedly distended vessels and an infiltration of lymphocytes and polynuclear leucocytes.

METHODS EMPLOYED TO DEMONSTRATE THE BACILLUS MALLEI.

(*a*) From alcohol to distilled water; to slide; blotted; carbol-fuchsin for 30 minutes; blotted; washed three times with 0.3 per cent. acetic acid, not more than 10 seconds each time; washed carefully in distilled water; blotted; cleared in xylol and mounted in xylol balsam.

(*b*) Alcohol to distilled water; to dilute fuchsin solution, warmed gently (about 50 C.) for 20 minutes, blotted; 1 per cent. acetic acid for one-half minute; distilled water; blotted; absolute alcohol drop by drop (not more than one-quarter minute): cleared in xylol and mounted in xylol balsam.

Schütz's Method: 24 hours in equal parts concentrated alcoholic solution of methylene-blue and caustic potash 1:10,000; washed in acidified water; 50 per cent alcohol for 5 minutes; absolute alcohol for 5 minutes; xylol; xylol balsam.

Löffler's Method: 20 minutes in methylene-blue solution; 5 seconds in distilled water 10 cc., concentrated sulphuric acid 2 drops, 5 per cent. oxalic acid 1 drop; washed quickly in distilled water; absolute alcohol; xylol; xylol balsam.

Nicolle's Method: Carbolated thionin-blue, overstained; carefully decolorized with 1 per cent. acetic acid; xylol; xylol balsam.

Modification of the last method: Stained with carbolated thionin-blue; washed in distilled water; 10 minutes in aqueous sol. of ammonia molybdate 1:10, slightly warmed; carefully washed in distilled water; absolute alcohol; xylol; xylol balsam.

The absence of a history of infection from a glanders source, as well as the results of the numerous examinations which were made, leave the nature of the affection in considerable doubt. The failure to obtain the characteristic reaction in the inoculated guinea-pigs, as well as the absence of any typical growth of bacteria on the various media employed, would seem to exclude glanders with a fair degree of certainty from the diagnostic possibilities.

Although the patient presented skin and mucous membrane lesions of a highly infectious nature, they differed in many essential features from the eruption in glanders, notably in the absence of lymphatic vessel and node involvement following the local infection of the finger.

The primary lesion in this case was a superficial vesicle while in glanders the characteristic skin lesion usually begins deep in the corium, changing from a papule to a pustule, and later into irregular ulcerated patches or involvement of the deeper tissues or joints.

Several infectious processes of the skin involve the mucous membrane either simultaneously or consecutively, so that lesions of these structures, while suggestive, by no means afforded conclusive evidence of the existence of glanders.

The fully developed skin lesions consisting of gangrenous patches and sloughing ulcers, together with the severity of the septic infection and the mode of death, spoke in favor of the disease in question.

This view was also supported by the absence of autopsy findings pointing to a septic infection of a well defined type.

We are not familiar with an affection of the skin of staphylogenic or streptogenic origin which presents features closely allied to the eruption under consideration. Still it is possible to imagine that staphylococci or streptococci with greatly increased virulence might be responsible for such a clinical picture. The abundance of staphylococci in the secretions and in sections from all the lesions strongly supports the view that they were an active complicating factor if not directly concerned in their production. It is a matter of regret that the etiology of the affection was not made clearer by the investigations that were made. We feel, however, that the case is worthy of record in that some future observation may lead to its proper classification among the numerous skin infections.

DISCUSSION.

Dr. James C. White wished to ask Dr. Fordyce when the patient was last vaccinated.

Dr. L. C. Pardee wished to inquire if the eruption in Dr. Fordyce's case had any similarity to the bullous lesions in the cases reported by Dr. Howe at the last meeting.

Dr. Thomas C. Gilchrist wished to congratulate Dr. Fordyce on the thorough examination which had been made in the case he reported. The case was of great interest from a bacteriological standpoint, because it was known that the staphylococcus might produce very severe forms of infection, although in the case under discussion they had not produced fatal results in the guinea-pigs which were inoculated. Although the bacilli found were not demonstrated to be pathogenic, still they might have borne some relation to the case.

Dr. Henry W. Stelwagon: It appeared to him that the case was an example of one of those infections following vaccination or inoculation from an animal source. He had been impressed by the fact that many of these pemphigoid diseases had their source in some animal contagion, and he thought that was true also in the pemphigoid eruptions following vaccination.

The President, Dr. Bowen: It seemed to him that the case bore some resemblance to the acute form of pemphigus described by the French, occurring particularly in butchers and those who had to do with animal products. He had had such a case in hospital last year: it was of a severe type, but the patient eventually got well.

Dr. James S. Howe thought Dr. Fordyce's remarks in regard to the depth of the ulcers showed that the case was very different in that respect from the cases he reported last year. In none of his cases had he observed any deep, punched-out ulcers. The lesions that occurred in the mouth and pharynx and the mucous membrane of the nose were very similar to those in the cases he reported. The severity of the symptoms, the temperature, etc., and the general course of the process also reminded him of the cases that occurred in Boston.

Dr. Fordyce, (closing the discussion): The lesions were deeper than in the bullous type of eruption following vaccination. They were deep ulcers, even reaching to the bone. There was a rapidly spreading necrosis, such as was not seen in pemphigus. The case did not suggest a vaccination eruption. He did not know whether the question of a recent vaccination came up or not. It was an eruption that was very rapidly auto-inoculable. For example, a lesion on the scrotum was noticed one day and the following day there was a lesion on the thigh where the parts had come in contact.

ERRATA.

Page 490.—In Dr. Engman's article on Paludides, November issue, in the seventeenth line from the bottom of the page, read "these" instead of those and "all" instead of one.

Page 492.—Ninth line from the top of page and tenth word from the beginning of the line, read "three" instead of those.

NEW YORK DERMATOLOGICAL SOCIETY

318th Regular Meeting, October 27, 1903.

Charles T. Dade, M.D., President in the Chair.

A Case of Seborrhœal Dermatitis. Presented by Dr. George T. Jackson.

The patient was a mulatto. He has had seborrhœal eczema for years upon his scalp and sternum, and has lost most of the hair from the top of his head. The peculiar feature of the case was a wavy raised line which

ran over the anterior part of the bald scalp down on each side, over the temples, to end in a scallop behind the ear. In front of this line, and well up on the forehead, there was a ring-shaped lesion of the same character. The raised line was easily scraped away with the finger nail, and it felt like sebaceous matter.

Dr. Fordyce considered the case seborrhoic dermatitis.

Dr. Elliot agreed in the diagnosis, considering it a rather interesting serpiginous and circinate form.

Dr. Lustgarten considered it a parasitic form of seborrhoic eczéma. Dr. Bronson suggested a bacteriological examination as it was rather an unusual form although obviously parasitic.

Dr. Dade had often observed seborrhoic dermatitis between the shoulders with a marked elevated border.

Case of Ichthyosis Hystrix. Presented by Dr. Whitehouse.

Lena K., aged 5½ years. Eruption was first noticed by the mother in the form of rough scaly patches around the edge of the right ear when the child was a year old. These soon became wart-like and darker and were quickly followed by streaks of wart-like papules which entirely surrounded the mouth. Other smaller patches developed through the scalp and on the cheeks, followed later by lesions on the right thigh and leg, external genitals, right forearm and right side of trunk. The eruption, with the exception of the lesions on the face and scalp, is distinctly unilateral. Broken lines of papillomatous growths extend from the right side of vulva around the inner side of right thigh to the popliteal space, continuing down on the calf of the leg. The larger patches are on the vulva and inner surface of thigh; one measuring two inches in length by three-quarters inch in width. Similar streaks extend from the backs of the fingers of the right hand along the radial and posterior side of right forearm to about two inches above the elbow. The eruption on the trunk is confined to one continuous linear patch about one-half inch in width, beginning at the median line at level of sixth dorsal vertebra, extending forward on the right side parallel with the ribs and curving downward as it approaches the front, ending just above and to the right of the umbilicus. The eruption on the face, scalp and ears is made up of narrow, warty bands, one-half inch or more in length and distributed rather irregularly. The palms and sole are free. The unaffected skin is apparently normal, as also the nails and hair, though the scalp is quite scaly.

When untreated, the patches bore black horny projections, which would become painful and excoriated by contact with the clothing. Perspiration seems to be normal except on affected areas where it is diminished or absent. The eruption is slightly better in the summer.

The family history is negative. The chief interest in the case lies in

the rather unusual distribution of the eruption on the face and scalp, which localities are more commonly unaffected.

Dr. Jackson considered the case one of linear nævus, thought the term ichthyosis hystrix was not appropriate to the condition.

Dr. Bronson wished to hear Dr. Whitehouse on the lines of distribution.

Dr. Elliot considered the case one of nævus unius lateralis.

Dr. Sherwell thought the title of the case as presented was a misnomer. The disease was a papillary tumor with a neurotic determination. Thought the term nævus unius lateralis was better.

Drs. Allen, Fordyce and Lustgarten concurred in preferring the latter term.

Dr. Whitehouse thought the extent of the distribution and the peculiar features on the scalp and face would rather favor the diagnosis of ichthyosis hystrix rather than a nævus. He admitted that on the leg the distribution did conform to the linear type of nerve distribution.

A Case of Hodgkins' Disease Successfully Treated by the X-ray. Dr. Edward B. Finch, introduced by Dr. E. B. Bronson, presented this case.

R. W., male—age 18, began to feel run down about 2½ years ago. Pain gradually developed in left shoulder and about a year ago a tumor began to show at left border of sternum about the level of 2nd rib. In February, 1903, in Boston, a portion of this tumor was removed and the disease was pronounced lympho-sarcoma, or Hodgkins' disease.

Blood examination by F. T. Lord on March 5: "Red blood corpuscles, per c.cm., 4,720,000; white cells, 23,000; hæmoglobin, 70 per cent. Differential count of 500 leucocytes: poly-morpho-nuclear leucocytes, 84.4 per cent.; lymphocytes, large, 5 per cent.; lymphocytes, small, 7.6 per cent.; myelocytes, 0.0; eosinophiles, 2 per cent; mast cells, 1 per cent. Red cells normal in size and shape. Good color. No nucleated forms. No malarial parasites. Blood plates normal in number." Guinea-pig inoculations negative. Tuberculosis and syphilis were excluded.

On July 23rd, Dr. F. H. Zabriskie, of Greenfield, Mass., sent patient to Dr. Finch for X-ray treatment. Patient was seen by Dr. W. J. Morton at this time, who confirmed the diagnosis of Hodgkins' disease and who advised the use of quinine in conjunction with the X-ray.

Physical examination: Complexion, sallow and unhealthy; eyes, dull; left shoulder carried forward and held rigid; over manubrium sterni and to left was a soft protuberance about 3 inches at base, projecting about ½ inch, with crescentic scar below, some four inches in length with small discharging sinus at its right end (site of operation). Cervical, axillary, and inguinal glands could be distinctly felt, some of them being apparently about ⅜ inch in diameter Heart, lungs and liver apparently nor-

mal. Spleen could not be felt below border of ribs. Weight, 136 lbs. With fluoroscope presternal mass can plainly be made out, as well as enlargement of spleen.

On July 24th X-ray exposures were begun and continued almost daily until Sept. 7th, very high tube being used, ten inches from target to skin, for ten minutes over a given area, each seance lasting from 40 to 90 minutes. Pain disappeared after 4th exposure. Glands became progressively smaller and on Aug. 28th only a few could be felt on careful palpation and the presternal mass had entirely disappeared. On Sept. 7th (31st treatment) the whole trunk was red and hot and exposures were stopped until the 14th, when there was much pigmentation and exfoliation. Two exposures only were given and then an interval allowed till Oct. 13th. At that time skin was well tanned, patient feeling perfectly well and with a general appearance of good health. Only with difficulty could small glands be felt under left jaw, in each axilla, and in right groin. Weight, 146 lbs. (an increase of 10 lbs). Spleen is apparently normal. The fiftieth exposure had been made on the morning that the case was presented.

A blood examination was made on Oct. 19th by Dr. Harlow Brooks, with the following report: "Hæmoglobin, 86 per cent.; red corpuscles, per c. m., 3,552,000; leucocytes, 9,200; clot formation, slow but complete; blood plates, few. Red corpuscles show slight variation in size and poikilocytes are infrequent. No cells showing cytoplasmic degeneration are present and no nucleated red corpuscles were found. The erythrocytes are notably deeply stained with hæmoglobin, more so than in the ordinary specimen of normal blood. No malarial organisms are present. The differential leucocyte count shows the following: polymorphonuclear (neutrophiles), 87 per cent.; lymphocytes, 6 per cent.; mononuclears, 2 per cent.; eosinophiles, 3 per cent.; transitionals, 2 per cent.; basophiles, 0."

"I am inclined to account for the increase in the neutrophiles as a result of the action of the X-rays, for I have seen a similar condition in other cases where the rays were applied in altogether different conditions."

Before the X-ray treatment, the use of arsenic and the iodides had been pushed to the limit without favorable effect on the disease. During the X-ray treatment, quinine, 3 grains, and small doses of iron, arsenic, and strychnine were given. For the first two weeks the temperature fluctuated slightly each day from 98.6 degrees to 99 degrees.

Dr. Allen had treated two cases of Hodgkins' disease with the X-ray, in one, that of a boy in which the prognosis had been hopeless, he had noticed improvement after the first treatment. There was marked diminution in the size of the enormously swollen axillary and cervical glands; the breathing which had been much interfered with by the enormously swollen glands became easier; the anæmic condition improved. He could

not say what the ultimate result had been as the case had passed out of his observation.

Dr. Fordyce thought it was a question as to how much benefit the X-rays were in changes of the internal organs.

Dr. Sherwell thought there was no doubt as to the improved general nutrition of the patient. He thought the depilation of the beard was quite interesting.

Dr. Lustgarten thought more care should be taken in classifying these cases in accordance with the clinical etiology. Cases due to a tubercular infiltration of the glands should not be called Hodgkins' disease. Syphilis was another cause of enlarged glands which might develop into a lympho-sarcoma. Blood counts and microscopical examinations of the glands should be made so as to establish which of these cases were amenable to treatment and which were not.

Dr. Bronson in closing the discussion said that this case was one in which the prognosis had been most grave, in fact, hopeless, and that the beneficial effect of the X-ray had been undoubted, as the patient was apparently restored to health. It was noteworthy to observe the impunity with which the rays had been used for one hour a day for three months. There had been no serious dermatitis, pigmentation or alopecia. The spleen and liver which had been enlarged were now reduced to normal size. Quinine had been given internally in sufficient quantity to produce fluorescence in the body under the action of the X-ray according to the idea experimentally established by Morton.

A Case of Artificial Acne. Presented by Dr. Fordyce.

The patient, a male, forty-two years old, was, when the eruption developed, a fireman in the power house of the Manhattan elevated road. He used a large quantity of lubricating oil and his clothing was constantly saturated with this oil. His upper extremities and the back of his neck were the seat of a large number of papular and pustular lesions interspersed with innumerable comedoes. The clinical picture was one of a tar acne and was doubtless due to the lubricating oil. The localization was probably owing to the prolonged contact of the oil-saturated clothing with the skin. The usual sites of acne vulgaris were not implicated.

Dr. Mewborn considered the case to present many points of resemblance to tar-acne. In this case it was probably the paraffin oil mixed with particles of iron from the machinery which acted as obstructive plugs in the sebaceous follicles causing a comedo and inflammatory reaction. It was curious that the face was so entirely free from lesions.

Dr. Lustgarten wished to know the chemical composition of the oil used.

Dr. Fordyce replied that the oil had not yet been analyzed. That the shirt sleeves were almost constantly saturated with the oil while the hands

and face were washed more frequently. This would explain the distribution of the lesions.

A Case of Xeroderma Pigmentosum. Presented by Dr. Allen.

An Italian boy of 16 years with three lesions of epithelioma upon the face undergoing resolution and cicatrizing under radiotherapy. The disease had begun in early life and four years ago involved the left eye, the sight having been wholly destroyed for three years. The eye-ball was removed about a year ago after some decrease in the cancerous mass had occurred under ray influence. Epitheliomata have appeared at frequent intervals upon the face for over three years. There is roughness and pigmentation of the skin and numerous adherent crusts similar to those of seborrhœa (cornu cutaneum). The left globe had shown a patch of cancerous degeneration for over a year, and this was improving under X-ray exposures, while several large nodular cancers involving the canthus, nose and cheeks had disappeared under treatment.

Dr. Bronson thought the epithelioma was unmistakable but that the xeroderma was not typical. The lentigo was there but it was confined to the face. All the parts exposed to the light should be affected. There should be more atrophy, more eczematization.

Dr. Piffard's only objection was to the term xeroderma. Xeroderma simply meant dry skin. He thought it should be called *lentigo maligna.*

Dr. Whitehouse thought that although the clinical picture was not typical he believed the case to be xeroderma pigmentosum.

Dr. Lustgarten considered that all the features, lentigo, atrophic spots and the epithelioma stamped it as a case of xeroderma pigmentosum.

Dr. Allen said that on account of the peculiar eye conditions the case would probably have been considered even more interesting to ophthalmologists than to dermatologists. The malignant condition developed on the cornea and destroyed the globe before extending to the lids. The right eye was improving under X-ray treatment instead of going on to complete destruction as the left eye did.

Parakeratosis Variegata.

(Case shown at the last meeting.) Again presented by Dr. Sherwell, who stated that the lesions had undergone considerable involution since the last meeting. Many of the patches had faded away completely and very conspicuous ones on the forearm had become scarcely visible and this without any treatment whatever.

Drs. Whitehouse, Jackson, Allen, Fordyce looked upon the case as mycosis fungoides (premycotic stage.)

Dr. Bronson remarked upon the slight furfuration and the absence of keratosis. The case had more the appearance of an angio-neurotic affection. The absence of itching he did not consider of any great diag-

nostic value as that was not to be expected except when there was more infiltration than was present. He would not call it positively a mycosis fungoides.

Dr. SHERWELL was favorably impressed by Dr. Bronson's suggestion as to the angio-neurotic etiology, particularly as in one week, due to the cooler weather, the lesions had so greatly involuted. Each winter the eruption goes away. He still maintained his diagnosis of parakeratosis variegata.

A Case of Prurigo (Hebra). Presented by Dr. Jackson for Dr. Fox.

The patient was a girl, 7½ years old, born in this city of Russian-Jewish parentage. The disease began in infancy. It was typical in appearance, affecting chiefly the arms, legs, and face, the trunk being comparatively free. The eruption was worse on the legs than on the arms, and the glands in the groin were enlarged. The bends of the elbows and the popliteal spaces were unaffected. The child has been much benefited last year while under treatment at the Vanderbilt clinic, but had relapsed recently and was as bad as before.

Dr. ALLEN considered the case as one of true prurigo. He has seen the disease many times in natives and thinks that all these cases do better in this climate.

Dr. LUSTGARTEN indorsed Dr. Allen's views and cases which he (the speaker) formerly thought incurable he had seen become fairly well. He thought that many cases of *lichen urticatus chronica* which was a true prurigo, with less dryness of the skin, less infiltration of the skin, get well and then it is not considered as a true prurigo Hebræ.

A Case of Paronychia et Onychia Luetica Totale.

Dr. ALLEN presented a young man almost incapacitated from disease of the nails involving both hands and feet. There was a history of luetic infection of eight months ago. Treatment had been continuous almost from date of infection. He had been under Dr. Allen's observation for about ten days. Radiotherapy had been tried for the hands, because of the well known effect of the ray upon the tissue about the nails and improvement had been seemingly much more rapid than in the case of the toe-nails to which mercurial applications had been continued and no rays applied. Internal measures had remained practically unchanged.

Dr. BRONSON had never seen such a general paroynchia syphilitica.

Dr. LUSTGARTEN doubted the efficacy of the X-ray in these cases. He had seen a case of serpiginous syphilide of the nose which had been treated by the X-ray three times a week for six months under the mistaken diagnosis of lupus vulgaris without any benefit whatever. The case promptly healed under mercurial injections.

Dr. Sherwell had seen a case similar to the one presented in a boy. The nails of all the fingers and toes were affected, nails shed and matrices exposed. In reply to a question from Dr. Dade as to time since the initial sore, stated that it was in the fourth month and that cure was effected by inunctions.

Dr. Allen stated that in this case in spite of protoiodide internally and inunctions the toes were in a horrible state. After a few exposures to the X-ray at close range the improvement was rapid.

A Case of Canities. Presented by Dr. Jackson for Dr. Fox

The canities was limited to a tuft on the vertex of head. The patient was a man who stated that the patch had been there for four years and had come on about four weeks after the application of an arsenical paste to an epithelioma on the back of the neck. The arsenic gave him intense pain for some twelve hours, the pain running up on the back of the neck and down to the shoulder of right side.

Dr. Mewborn did not consider that the great occipital nerve supplying the spot of canities, could be affected by a traumatism low down on the back of neck.

Dr. Fordyce had frequently observed these grey spots follow attacks of severe supra-orbital neuralgia.

A Case of Paget's Disease of the Gluteal Region. Presented by Dr. Fordyce.

The patient was a woman aged sixty years with an irregularly rounded flat, dark-red lesion on the left gluteal region. The involved area was about three inches in diameter with rather sharply, definite margins. The lesion was dry with the exception of a central spot, perhaps three-quarters of an inch in diameter, which was eroded, granular, and which bled on slight irritation. The margins of the lesion were somewhat elevated, paler than the older portions and simulated the rolled pearly edge of an epithelioma. The duration of the patch was stated by the patient to be about six years.

Dr. Elliot said that if the lesion were around the nipple there would be no question of the diagnosis as Paget's disease.

Dr. Lustgarten considered it as a form of Paget's disease.

Drs. Whitehouse and Jackson concurred in the diagnosis.

Dr. Fordyce promised to report later on the histopathological examination.

A Case of Multiple Epithelioma Cured by the X-ray. Presented by Dr. Allen.

A man of about 62 years, who for over 25 years had suffered from

multiple and recurrent epithelioma, having lost the left eye in consequence, now for the first time in some ten years, during which Dr. Allen had treated the patient at different times, could he be considered well and free from any evidence of the disease. Fifteen lesions had been removed during the past year by the X-ray alone or aided by electrolysis. This result the speaker thought could not have been attained, or at least not so well without the ray's aid.

A Case of Lichen Planus. Presented by Dr. Allen.

The case was a woman with characteristic lesions over both extremities. Upon her wrist were several vesicles and small hemorrhagic bullæ which the speaker had artificially produced by scraping. He presented the patient to emphasize his claim, made several years ago, that not only do bullæ and vesicles exist at times in lichen planus when arsenic has not been given, but that the papular lesions could thus be transformed at will. The statement was also made that changing the nature of the lesion in this way was equivalent to a cure of the lesion in question. He again desired to state that curettage was at times an excellent method of cure, for localized patches, the tissue composing the separate and confluent papules being soft and readily scraped out.

Dr. Piffard had seen cases of lichen planus in which these vesicles occurred. The relief of the lesions by local treatment was not new. He had obtained great amelioration by the use of the hypostatic current.

Scientific Communications.

Dr. Allen introduced Dr. Samuel Stern, radiotherapist to Dr. Lustgarten's Clinic, Mt. Sinai Hospital, who read the following paper:

A METHOD FOR MEASURING THE QUANTITY OF X-RAY.

Perhaps the most important question to solve at the present time in connection with accurate therapeutic application of the X-rays is some method to measure the exact amount of rays administered to any particular patient or in the cure of any definite pathological lesion. Such a plan would enable us to keep an account of the amount of rays necessary to cure a particular lesion, thereby putting us in a position to repeat definite results previously obtained, or to avoid dangerous consequences, at times seen as the result of over-exposures. I will not attempt to discuss the various methods employed at present to measure the quantity and quality of rays, as no doubt with these you are all familiar.

There is only one to my knowledge which has any distinct claim to being a quantitative measure of X-rays; this is Holzknecht's chromoradiometer. This is a somewhat complicated apparatus and has not been used very extensively in this country.

I would like to suggest a method which is very simple, easily carried

out, does not require any elaborate apparatus, and is, I believe, thoroughly accurate in registering the exact amount of rays penetrating a particular surface. As it has for its fundamental principle the action of rays upon photographic films, I have called it THE PHOTORADIOMETER. The effect produced by light on a sensitized surface is in direct ratio to the intensity of the light rays to which it is subjected, and the time of exposure. These two make up the amount or quantity of light affecting this surface. The preponderance of evidence at the present day seems to favor the theory that the X-rays consist of very minute wave lengths of light-vibrations. This seems to be substantiated by the fact that they possess a great many of the qualities of light—amongst these one of the most important is its ability to affect photographic plates in a very similar manner to that of ordinary light rays. We all know that in taking radiographs the darkness of the picture will depend on the quality of the ray and the length of exposure; the two combined making up the quantity or exact amount of rays passing through the sensitive plate. If it is conceded that the changes produced by light on a photographic film are in proportion to the length of exposure and the intensity of the light waves acting upon it, and if we can further concede that the hypothesis of the X-rays being a form of light is correct; it is evident that the same principle which enables us to judge the amount of light rays by its effect on a photographic film could be utilized to measure the quantity of X-rays emanating from any particular source. Most authorities admit that the effect of the X-ray is exactly proportional to the amount absorbed, whether it be by a photographic plate or the vital human tissues. It is a very simple matter to put a piece of sensitized paper directly upon the surface to be treated, so that the rays will pass through this film before they enter the parts. The film will not diminish the intensity of the rays in any noticeable way and will accurately register the exact amount passing through it. This can be readily judged by the depth of discoloration on the film, which compared and marked with a corresponding number of an established standard scale will give the quantity of rays in numbers easily put down for future reference or computed. A scale may be established by using a certain standard film and exposing it a known distance from a tube of definite vacuum, in which the rays are generated by an apparatus of an established spark length, running at a known amperage—if we expose a film for each successive minute under the above conditions, numbering each with the number of minutes exposed, until the discoloration on the film will be completely black, we will possess a standard for future comparison. I would suggest printing this accepted standard on every film used, so that the discoloration on the film, as the result of the exposure, may be readily compared and marked with its corresponding number. These numbers are marked down and added up, the sum total giving at a glance the amount of rays the patient has received up to that time.

The films can be enclosed in black envelopes, so that they may be handled without being affected by ordinary light. Their development is a very simple procedure, requiring only a few minutes, and may be done at any time after a number of them have accumulated, as at the end of the day's work. In following out experiments undertaken along this line, I have found the greatest difficulty in getting a photographic film which would answer the purpose. The majority of films act too rapidly, becoming entirely black after a few minutes' exposure. I have had a special film prepared for the purpose, which does not act so rapidly, and is better than any other on the market, but is still not entirely satisfactory—with this film I have succeeded in registering exposures up to ten minutes, to a medium tube with a good ray, at a distance of three inches from the surface of the tube. So very few single exposures are given, amounting to more than this quantity, this result could be regarded as almost perfect.

A standard once established, should be used universally, so that if a case is reported as having been cured by a certain number of rays or a definite result produced, we would all know just what the reporter meant.

Therefore it is advisable to make repeated experiments, so as to be sure that a particular film once selected is the best that can be used for the purpose.

I believe that this method could also be utilized in measuring the amount of radiations emanating from a specimen of radium. It would also offer a simple way of determining the radioactivity of any specimen in question. Here it would be interesting to establish a standard of comparisons between the radium emanations and the X-rays generated in a vacuum tubs. It would put us in a position where we could use radium for therapeutic purposes in a scientific manner.

Unfortunately I did not have any opportunity as yet to make experiments in this field, but hope to do so in the near future.

In closing I want to express my thanks to Dr. Allen for his valuable aid and suggestions with which he so liberally assisted me in pursuing these investigations.

In the discussion that followed the reading of the paper Dr. Piffard showed that the author used a "developing" and not a "printing-out" paper, a technique which admitted much room for variation.

A. D. Mewborn, Secretary.

CHICAGO DERMATOLOGICAL SOCIETY.

Since the Last Report

THREE MEETINGS HAVE BEEN HELD,

At which the Following Cases, Photographs, etc., were Presented:

Case I. Impetigo Contagiosa. Presented by Dr. Anthony.

This case was of interest as it occurred in a five months old infant, and in appearance suggested hereditary syphilis. The eruption began with a bulla the size of a hazel nut on the back of the neck; it arose from apparently normal skin and had no areola. This lesion soon ruptured, leaving an excoriated surface which spread rapidly in a serpiginous manner, affecting only the superficial layers of epidermis, until it had covered the entire neck. Simultaneously other bullæ developed over the abdomen and thighs. These, as well as those on the neck, were flaccid and on rupture their sites were covered with yellowish crusts.

Case II. Tubercular Dactylitis. Presented by Dr. Anthony.

The patient was a bottle-fed boy of twenty-two months, healthy in appearance and well nourished. The mother died three weeks before of tuberculosis of the lungs. No history of syphilis was obtainable. The first phalanx of each finger shows dactylitis; the second and third phalanges are normal. Under the chin is a waxy nodule in the skin which is unmistakably tubercular, and on the cheek, one finger and thigh are several tubercular deposits. This case is of interest as being an exception to the law of Hochsinger (Archiv 1900) that dactylitis affecting the first phalanges of all fingers is syphilitic, and that doubt can only exist where the second and third phalanges are involved or where only a few of the first phalanges are attacked.

Case III. Epithelioma of Nose. Presented by Dr. Zeisler.

Case IV. Tinea Trichophytosis Capitis and Pityriasis Rosea.

Presented by Dr. Hyde.

This patient was a child of eight years exhibited with a number of others as showing typical ringworm of the scalp. The eruption on the body was at first thought to be part of the same disease, but on examination was found to be pityriasis rosea.

Case V. Tinea Circinata. Presented by Dr. Campbell.

This case occurred in a young man twenty-five years of age, and presented on examination the appearance of a mild psoriasis, both in regard to the lesions themselves and their location. No traces of the trichophyton fungus were obtained by scraping and the preparation of fresh slides, but appeared abundantly in the stained tissue sections.

Case VI. Tubercular Syphilide. Presented by Dr. Fischkin.

This case occurred in an elderly man and was clinically unmistakable. The point of interest being the absence of any trace of a former chancre and the absolute denial of preceding eruptions.

Case VII. Morphea. Presented by Dr. Pusey.

Case VIII. Epithelioma of Face. Presented by Dr. Pusey.

This patient was exhibited as illustrating the effect of radio-therapy. The site of the former lesion was occupied by a thin atrophic scar, which showed no trace of epitheliomatous tissue clinically. Several months had elapsed since the completion of treatment.

Case IX. Multiple Neuro-Fibromata. Presented by Dr. Hyde.

This case occurred in a man about forty-five years of age, who showed on both thighs, and other regions of the body, deep, painful, subcutaneous nodules occurring in a linear arrangement parallel to the long axis of the limbs. These on section had been proven to be neuro-fibromata.

Case X. Pityriasis Rosea. Presented by Dr. Pardee.

This patient was a young man twenty years of age, who exhibited a most extensive eruption which occurred not only on the trunk, but extended to the ankle on both legs and nearly to the wrists upon the arms. The rings were large and irregular in shape from fusion of lesions. Considerable discomfort on account of the persistent itching was complained of. The eruption had persisted for six months in spite of vigorous treatment by several physicians.

Case XI. Hydroa Aestivale. Presented by Dr. Anthony.

This patient was a boy thirteen years old. The eruption first appeared on the face at the age of seven, and was diagnosed varicella. Subsequent history shows that if he remains within doors the lesions do not appear, but exposure to the wind and sun in spring and summer will cause a burning sensation of the exposed skin, and in a few hours the eruption will appear. No lesions have ever occurred upon the covered parts of the body nor has the eruption occurred in winter.

No vesicles were present at the time he was presented, simply a few acne-like papules on the face and backs of hands, and a few crusts. The skin of the face is extensively marked with depressed vacciniform scars and a few similar scars are to be seen on the hands.

Case XII. Tuberculosis Verrucosa Cutis. Presented by Dr. Ormsby.

This patient was a man forty-five years old, who exhibited upon the back of his left hand lesions extending from the wrist to the knuckles. The center of the hand was of a deep, reddish purple colored scar tissue with papillomatous projections scattered over its surface. At the edge of

the patch were fungoid elevations from which pus exudated on pressure. Sections showed typical tubercular structure. The lesions had been present about a year when he appeared for treatment.

Case XIII. Bromoderma Tuberosum. Presented by Dr. Pusey.

Case XIV. Vegetating Iododerma. Presented by Dr. Fischkin.

The patient, a woman forty-six years of age, gives a history of a papular eruption appearing three weeks previous to her application for treatment. The lesions were scattered over the abdomen and limbs. Soon vesicles and pustules appeared in the same regions and rapidly broke down leaving a raw surface which soon became condylomatous. At present several such lesions, ranging in size from that of a quarter to half a dollar, the larger ones being about three cm. elevated above the skin surface are to be seen on the legs. On the chest and breasts are a few papules and wheal-like elevations surrounded by an inflammatory area. There is no history of syphilis but the patient has been taking medicine for a pain in the chest. The prescription was given her by a physician and she does not know what it contained.

Case XV. Lupus Erythematosus. Presented by Dr. Ormsby.

This was an extensive case of lupus erythematosus and was formerly exhibited by Dr. Schalek. It was brought forward to show the improvement which had taken place under radio-therapy.

Cases XVI., XVII., XVIII. Three Cases of Xeroderma Pigmentosum. Presented by Dr. Hyde.

The paragraphs which follow are reproduced from the stenographic report of remarks made by Doctor Hyde when the same patients were shown to the Chicago Medical Society.

Our first knowledge of xeroderma pigmentosum was obtained from the observation of two patients made by Prof. Kaposi, of Vienna, in 1863. Subsequently, when he wrote on the subject in 1870, he had seen two more cases. A careful study of the records in Europe indicates that there are scarcely more than 110 cases on record there; and including these 3 cases, we have a little less than a score on record in America. These three children are a brother and two sisters of one family. The father is a native of West Prussia; the mother of Oshkosh, Wisconsin, and they have had a family of eight children. Three boys born first are perfectly well; then came these three children; and afterward two others who are sound. The youngest of the two, an infant about one year old, was stripped and examined by me two days ago without exhibiting the slightest evidence of disease. The dermatosis is uniform in its appearance, and the three children before us illustrate the type of the affection. The boy is four, the girls respectively six and eight years of age. There is no symptom of the disease which cannot be seen in other cases. A peculiarity of xeroderma

pigmentosum is the complexus of symptoms at an early age, and these symptoms can readily be grouped in four tolerably distinct catgories, although there are authors who add several others. These others I believe to be sequences of the primary lesions.

1. Pigmentation, or freckling, is very distinctly marked, usually, as in the case of these children, most on the exposed surfaces of the body, (face, hands, forearms, upper chest), and in some instances, as in the case of the child in my arms, over the lower extremities and dorsum of the feet, varying from a light fawn to a deep chocolate color, deepening with years. Sometimes there are indistinctly isolated freckles or pigmentations; in other cases there is confluence forming areas without very distinct circumspection.

2. Whitish spots—maculæ, which are atrophic in character. These symptoms precede and sometimes follow the freckling. The white spots are usually most conspicuous upon the exposed surfaces of the body, often about the orbits and other portions of the face, but they are also visible in other regions. The maculations are smooth, whitish, slightly wrinkled, atrophic, and in some cases shrink so as to produce cicatrical contracture.

3. Telangiectases, minute blood vessels developing in the skin, which may be scarcely visible to you in this light. In the daylight there is a strong contrast between the freckling or pigmentation and the telangiectases. These latter vary in size from minute tufts to pinhead-sized elevated lesions.

4. The formation in different parts of the surface of the body, (the hands, face, and elsewhere), of nodes, nodules, or warts, as they are sometimes called, practically all of them epitheliomatous; so much so that the disease has been described as a *senilitas præcox*. The first patients I saw were examined by me in Paris in 1888, and these distinctly, from the beginning, showed "precocious" epitheliomata of the skin. The other symptoms of the disease described by authors, in my judgment, are secondary to those outlined under the four heads given. They are ulceration, breaking down of the warty growths, crusting, keratitis, ophthalmia, cicatrization following the ulceration, and in some cases the formation of a distinct epithelioma from the cicatrix. Sometimes there is a furfuraceous desquamation of the scalp. The warty lesions in most cases are precisely those which we see in persons of advanced years suffering from epithelioma. This little boy ten days ago had an area of ulceration near the tragus of the ear, which, if it had been somewhat enlarged upon a photographic plate, would have answered admirably for a picture of the "rodent ulcer" of our English friends, a strictly typical epithelioma; and the epitheliomatosis which is going on in the skin here and there, not only in these cases but in the others I have examined, is one of the most marked features of the disease.

The etiology is obscure. A number of authors assert positively that the lesions are induced in skins which are sensitive to the action of light,

PLATE XLVII.—To Illustrate Dr. James Nevins Hyde's Three Cases of Xeroderma Pigmentosum.





pointing as a prime feature in all cases to the fact that the exposed surfaces of the body are first involved, and that other regions of the body are only secondarily implicated. This child has freckles extending down the posterior aspect of the body toward the sacrum, and from the knee downward. It is held by those who believe that the light directly affects these cases, that the light in children of sensitive skins percolates through the clothing and produces the disease in that way.

The ocular lesions in these cases are keratitis and corneal opacities. You see all these children are blinking in the light. Although our oculists are disposed to believe that the ectropion is the chief cause of the keratitis, inasmuch as epithelioma has sprung from the ocular globe in similar cases, I am inclined to the belief, although I would not be understood as dogmatizing on the subject, that the condition recognized upon the skin is to a degree the factor in producing morbid tendency of the conjunctiva and cornea.

We are treating the epitheliomatous lesions of these little patients with the X-ray and in almost each instance marked improvement has followed. We have done this in the face of the apparent objection to such a therapy that the action of the X-ray is of itself capable of producing pigmentation, telangiectasis, and in instances new growths.

The prognosis in most cases is grave. A few patients have been seen where the disease seems to have been arrested for six, eight, or more years. Most of the lesions develop at the close of the first year of life. These children exhibited their first symptoms at about that time. The earliest age on record at which the disease has developed is between the third and fifth months. A few cases have occurred in people of seventy and ninety years of age, but we must accept such a report with reserve. The light colored, often reddish tinted hair is a conspicuous feature of many patients.

The photographs of these patients exhibit in fairly good detail the main features of the disease.

Case XIX. **Lichen Planus.** Presented by Dr. Lieberthal.

The patient showed six months before presentation a copious eruption of lichen planus on the skin and mucous membranes of the mouth. At the same time he was affected with gonorrhœal cystitis, which was being treated with nitrate of silver solution and although no treatment was employed for the lichen planus the latter disappeared, giving place to leucodermatic spots, which are now to be seen. Only traces of the eruption in the mouth are present.

Case XX. **Blastomycosis.** Presented by Dr. Fischkin.

The patient, a man fifty years of age, presented an ulcerating lesion surrounding the left orbit and including the lower eyelid and part of the cheek. Only the upper edge showed the characteristic papillomatous ele-

vations, the remainder being mostly reddened scar tissue. The specific organism was found upon microscopic examination, but cultures could not be obtained.

Case XXI. An Atypical Bullous Eruption. Presented by Dr. Pardee.

This case occurred in a man forty-five years of age and began with the sudden appearance in the left popliteal space of large bullæ. These lesions arose in some cases from the apparently normal skin, and others were preceded by deep reddish macules which spread rapidly at the edge, developing bullæ at their center. These bullæ broke down quickly, leaving a moist surface which soon healed. The eruption extended over the backs of both legs and thighs, which were somewhat swollen as a result of a chronic heart lesion. No history of any infection could be obtained. Rest in bed and a mild antiseptic dusting powder caused a complete disappearance of all symptoms in a few days.

Case XXII. Blastomycosis. Presented by Dr. Pusey.

The patient, a young girl nineteen years of age, showed on the left lower eyelid a fungating lesion about two cm. in width extending from canthus to canthus. It had been present two months. The specific organism was obtained in pure culture.

Case XXIII. A Case for Diagnosis. Presented by Dr. Schmidt.

This case occurred in a man forty years of age, who gave a history of having had syphilis twenty years ago. At present he shows over the legs, buttocks and back a fading eruption, papular and papulo-vesicular in character, leaving deep brownish pigmentation. In appearance it seemed to be, with the exception of location, a typical miliary papular syphilide. No sign of recent reinfection could be found and the grouping and location suggested Duhring's disease. Itching had been present in a moderate degree. The patient had been a heavy drinker but seemed in fair general health.

Photographs. Drs. Hyde and Montgomery.

1. Nævus linearis, extensive.
2. Endothelioma. (?)
3 and 4. Chronic hereditary trophœdema (2 cases).
5. Urticaria pigmentosa with xanthoma-like lesions but with typical histological structures.
6. A progressive pigmentary disease of face. (This case resembled clinically and histologically, one reported by Schamberg in B. J. D., 1901, Jan.)
7. Blastomycosis occurring in a woman of twenty-eight years, with tuberculosis of lungs. Lesions were located on the face, one eyelid, one hand and both feet. Cultures were successfully made.
8. Feigned eruption. A young girl of nineteen years showing on the left arm ulcers from two to ten cm. in size and of various depths, produced by the application of carbolic acid.

L. C. Pardee, *Secretary.*

ABSTRACTS.

Alopecia. Further Experimental Investigations of and the Localization of Skin Diseases. A. Buschke. (*Ber. Klin. Wochen.*, 1903, p. 888.)

This is a report of the author's investigation into the manner in which thallium aceticum produces alopecia when administered to animals. Thallium may cause a loss of hair on any part of the body in man, but in animals it never affects the hair of the abdomen. In an effort to cause the drug to affect the hair of the abdomen, the skin in this location was injured in various ways and subjected to irritation by chemical substances such as croton oil and chrysophanic acid, with negative results.

So minute is the dose of the drug required to produce alopecia in animals that we can not expect to find microscopical changes in the nerve tissue. Its action must be functional; nevertheless, we must bear in mind the possibility of its having a predilection for certain tissues just as methylene blue has for nerve tissue.

Pilocarpine has a diaphoretic action and it is supposed to stimulate the growth of hair; possibly thallium has an antagonistic action, causing the loss of hair and checking sweat secretion.

To determine this point both drugs were administered to animals simultaneously, and as no alopecia occurred in the early cases, it was believed that such an antagonistic action existed. Further study, however, showed that where the drugs were mixed a double decomposition occurred which rendered them inert. Where the drugs were administered at the same time but apart, no antagonistic action was observed and the thallium caused alopecia.

Kittens were given large doses of thallium and then pilocarpine and ammonia aceticum to ascertain what effect would be produced on the sweating of the paw. The results were negative.

The sciatic nerve was severed in some animals to ascertain if the drug acted on peripheral nerves or nerve centers; the results were not uniform.

The author next endeavored to find other substances which would produce alopecia. As he was not successful in this he concludes that the action of thallium is specific.—H. G. Anthony.

Foetal Syphilis, Treatment of According to Riehl's Method. (Riehl's Clinic in in Leipzig.) Hans Vorner. (*Arch. f. Derm. u. Syph.*, LXVI, p. 127.)

Riehl's method consists in introducing into the vagina vaginal cones composed of one grain of blue ointment and two or three grains of cocoa butter and then tamponing the vagina. The mercury comes in contact with the vaginal portion and is kept there by the tampon. This treatment in combination with the general anti-specific treatment is continued during pregnancy. The treatment is not affected by the time of infection, whether before, during or after conception. He gives thirty-six clinical histories of pregnant women who conceived not later than two and a half years after infection, and the vaginal treatment had very good results on both mother and children. Furthermore, the new born children were not so prone to intestinal troubles.—Lapowski.

Geroderma Dystrophicum. J. M. Eager, P. A. Surg. U. S. Marine Hosp. S. (*Ann. Rep. Marine Hospital Service*, 1901, p. 466.)

In the author's report of the pathology of the Italian immigrant as observed during the year 1900-01 at the port of Naples he mentions a number of cases of this curious disease which was first described by Dr. Gaetano Rummo, of the University of Palermo, two years ago. The term geroderma is derived from

γερων — an old man, and men affected with this disease may be detected at a glance on account of the yellow, anaemic, wrinkled skin, the beardless faces, the high-pitched feminine voices, and the general manner of carriage of old women. An examination showed an undeveloped condition of the genitals, absence of pubic hair, with abdomen and pelvis of the female type. The disease is quite common in Italy and the author has observed several cases in the United States.—MEWBORN.

Leucoplakia in Secondary Syphilis. D. W. MONTGOMERY, (*Med. News*, 1903, June 13, XX. Reprint.)

Only four cases of leucoplakia occurring during the secondary period have been reported. Montgomery adds this case which was that of a Scotchman, thirty-seven years of age, who contracted an initial lesion in August, 1900, while on a visit to the Philippines. In October of the same year he was bedridden with rheumatism of the right ankle. About February, 1901, a universal papular rash appeared, accompanied by alopecia, dystrophy of the nails and excessive vulnerability of the oral mucous membrane. The tongue was very irritable and numerous mucous patches appeared on the dorsal surface, some of which, about June, '02, showed the dense horny change in the epithelium, constituting a keratosis. M. insists upon the necessity of a vigorous hypodermic treatment with preferably a soluble salt of mercury to prevent the transformation of these patches into epithelioma. It is noteworthy that three out of the four cases hitherto reported as leucoplakia arising in secondary syphilis have occurred in women. Two cases reported by Barbe and Gaucher were cured by the hypodermic use of soluble mercury salts.—MEWBORN.

Leucoplakia Lingual. GAUCHER. (*La Presse Med.*, LIV, p. 493.)

In a lecture at L'Hôpital Saint Louis, the author insists that leucoplakia of the tongue is always of syphilitic origin. That where the antecedents of these cases are carefully searched, syphilis will be acknowledged or recognized in 90 to 95 per cent. of cases, and he estimates that there are at least 10 to 15 per cent. of syphilis insontium, not to mention the cases of conceptional and hereditary syphilis, which fail to be recognized. He admits that tobacco plays a considerable role as provocative agent, but claims that tobacco alone in the most hardened smoker will not cause leucoplakia unless syphilis is also present. After a description of the histology he points out three stages of evolution from the simple nacreous, to the sclerosed and finally to the vegetating and papillomatous condition which precedes the transformation into an epithelioma. Of course, the author does not imply that all cases follow this course, but he does insist upon the fact that every epithelioma of the tongue in his observation was consecutive to a leucoplakia, hence he concludes that *epithelioma of the tongue is a remote consequence of syphilis.* In the treatment he cautions against the use of iodide of potassium, which may hasten a malignant termination, but advises a soluble salt of mercury by hypodermic injection. For local treatment, when not ulcerated, he recommends the local application of a 1 to 50 solution of bichromate of potash. The galvano-cautery is used for the fungating stage. He is strongly opposed to the removal of small pieces of tissue (biopsy), for diagnostic purposes, as likely to determine a rapid extension of the cancer.—MEWBORN.

Leucoplakia and Cancer. J. DARIER. (*La Presse Med.*, LXI, p. 549.)

Darier attacks vigorously the ideas of Gaucher in proclaiming that the original lesion of leucoplakia is epithelial and that the subjacent lesion is secondary. Darier shows that this is contrary to all that we know concerning the syphilitic process, which has for a characteristic, the vascular and connective tissue changes at the commencement, affecting the epithelium secondarily. He protests most

strongly against considering that it is necessary to wait for ganglionic enlargement before pronouncing the case malignant. That even in the papillomatous or vegetating state the epitheliomatous changes have taken place and the most radical surgical intervention is indicated. To dally with specific medication is to condemn the patient to death. Darier, who has made hundreds of biopsies, has never observed the slightest evil effects, but considers that this means of arriving at a positive diagnosis is of great value in determining the moment for surgical operation. While granting that leucoplakia in a large majority of cases is of syphilitic origin, he opposes the dictum of Gaucher, the originality of which he attributes to Fournier, that cancer of the tongue is a remote manifestation of syphilis, as a most unjustifiable conclusion.—Mewborn.

Leuconychia, A Contribution to the Knowledge of. Theodor Brauns (Prof. Gustav Riehl's Clinic, Vienna.) (*Arch. f. Derm. u. Syph.*, LXVII, 1903, 63.)

The writer, who studied the foregoing disease, agrees that the whiteness is due to the presence of air in the substance of the nail, but differs in his explanations of the reason of the presence of air. Brauns had the opportunity of studying a well developed case of leuconychia, and from a critical review of other known cases and his own he concludes that disposition is an important factor in the development of the disease. Histologically we have to do mostly with a hyperkeratosis which, owing to disturbance in nutrition, is changed into a parakeratosis. The cause producing the change in nutrition may be different; it may be anaemia, as seen in anaemic eczema, neuritis, gastritis, typhus, recurrent fever, vitiam cordis, and trauma of the matrix. According to the writer it is better to distinguish the disease according to its development: acute or chronic, and not according to the form it presents clinically: punctata, maculata, striata, partialis or totalis.—Lapowski.

Leprosy of the Ovaries. L. Gluck and R. Wodynski. (*Arch. f. Derm. u. Syph.*, LXVII, 1903, 39.)

Only five cases of leprosy of the ovaries are reported with histological examinations in medical literature. From the reports it is hardly possible to obtain a clear understanding and explanation of the symptoms which leprous women present in regard to functional disturbances of their genital organs.

The writers examined the ovaries of five women who succumbed to leprosy and give the following description of the changes noticed by them. The ovaries of leprous women give a picture of chronic interstitial inflammation which tends to sclerosis of the tissues, tending according to the age of the individual either to hyperplasia or to atrophy of the diseased organs.—Lapowski.

Lichen Scrophulosorum. Fritz Porges (Prof. Pick's Clinic, Prague.) (*Arch. f. Derm. u. Syph.*, LXVI, 1903, p. 401.)

Whether lichen scrophulosorum is a pure tubercular disease of the skin, or whether it is produced by the toxins of the tubercle bacilli, is not as yet settled. Two cases, one of lichen scrophulosorum in a tubercular patient, and another, where after the injection of new tuberculine a skin eruption appeared, which clinically presented the appearance of lichen scrophulosorum, served the writer as a basis for the present contribution. The histological examination of the material obtained from the first patient showed the presence of tubercles with all their characteristic signs: round cells, epitheloid and giant cells. The tubercles were always connected with the follicles. No tubercle bacilli were found.

In the second case the histological pictures showed an erythemato-exudative process, with fresh inflammation, emanating from the vessels, hair follicles,

sebaceous and sweat glands; while in the papillary layer small and large islets of round cells could be seen. The appearance of lichen scrophulosorum after injection of tuberculin was observed by many clinicians and explained by the presence of a latent lichen which was brought into view by the action of the tuberculin, but the author's histological findings of fresh inflammatory manifestations speaks rather for the acceptance of such symptoms as belonging to the group of toxicodermiæ than to lichen scrophulosorum.—Lapowski.

Lupus of the Scrotum and Penis, A Case of. J. Wallart (Prof. Kaufmann's Anatomo-pathol. Laboratory, Basel.) (*Arch. f. Derm. u. Syph.*, LXVI, 1903, 1.)

Primary cases of lupus of the scrotum are reported by Hildebrand. The writer's case is the fourth published. It occurred in a man of twenty-eight years of age, whose family and personal history did not indicate any tubercular affection. The left side of the scrotum was occupied with whitish contracted scars; on the left inguinal region, on the lower surface of the penis, near the end of præputium and on the right anal region longitudinal undermined ulcers with infiltrated, eaten out borders, were noticed. By operative procedure the diseased parts were removed. The microscopical examination of the sections demonstrated the presence of tubercle bacilli in the granulation tissue and in the giant cells. The condition of the blood vessels presented an interesting feature. The endothelumen of the veins was narrowed and torn. According to the writer the condition of the veins strongly suggested the formation of tubercles on the inner surface of the vessels. In the surroundings of the small vessels and capillaries the presence of blood pigment in large quantities is very noticeable.—Lapowski.

Melasma Suprarenale (Morbus Addisonii), A Contribution to the Causation and Pathogenesis of. A. J. Pospelow and Ed. W. Gautier-Dufayer. (*Arch. f. Derm. u. Syph.*, LXVI, 1903, 355.)

The writers report a case of Addison's disease which improved after the administration of thyroid gland tablets and bromide of potassium.—Lapowski.

Mercurial Oil, a New Mercurial Remedy for Injections. Mangus Moller. (*Arch. f. Derm. u. Syph.*, LXVI, 1903, p. 88.)

Oleum Mercurioli (90 per cent. mercury.) Arvid Blomquist (*Arch. f. Derm. u. Syph.*, LXVI, 1903, p. 98.)

The new preparation is, according to Möller's observations, a clean, comfortable, painless and exact remedy. It was prepared by Blomquist. The mercuriol is an amalgam of mercury with aluminium and magnesium, and the mercuriol oil is a combination of mercuriol with dry almond oil. The preparation given by Möller (ol. mercurioli, 90 per cent.; ol. amygdalae aa. gm. 7.5. 45 per cent. mercurial for injection), contains in each grain 0.45 gr. of Hg. and 0.00027 gr. of aluminium-magnesium. The preparation is prepared under a temperature of about 150 degrees C., and it is sterile. Neither the needles nor the syringes should be cleaned with water; they must be thoroughly dry, as water decomposes the remedy.

Möller injected every fifth day from 0.010 to 0.135 gr., and obtained good results from six to ten injections. According to him these injections were painless.—Lapowski.

Mercury, the Action of Upon Tissues and the Attempt to Demonstrate Its Presence Histo-Chemically. Richard Fischel (Prof. Pick's Clinic, Prague.) (*Arch. f. Derm. u. Syph.*, LXVI, 1903, 387.)

The author undertook to verify the method and statements of Justus in regard

to the action and presence of mercury in syphilitic tissues. The material was obtained both from persons treated and not treated with mercury and from animals in which mercury was injected for experimental purposes. The results did not confirm Justus's conclusions, as identical microscopical pictures, which, according to Justus, go to prove the presence of mercury in the tissues, were found in tissues which were not exposed to the action of mercury.—Lapowski.

Naevi, A Contribution to the Knowledge of Generalized. Paul Strasser (Prof. Vierordt's Polyclinic, Heidelberg.) (*Arch. f. Derm. u. Syph.*, LXVI, 1903, 21.)

Although the disease, according to the anamnesis, started when the patient was seven months old, the author nevertheless classifies the case as nævus. It occupied the left portion of the scalp, face, trunk, labium major, back, left arm, forearm, left palm and left femur and crus. The writer then gives a critical review of the etiology of nævus, taking his case as a basis for discussion.—Lapowski.

Pemphigus Neonatorum, A Case of P. Richter. (*Dermatitis exfoliativa neonatorum,*) (Ritter) **and the Infection of the Mother and Death of the Infant.** Nicolaus Ostermayer. (*Arch. f. Derm. u. Syph.*, LXVII, 1903, 109.)

Four days after birth there appeared an exfoliated dermatitis around the lower lip, extending to various regions of the body, and leading in a few days to inanition and death. The mother was affected on both nipples. The surrounding skin was excoriated, inflamed and swollen, wet and red. On the border of the nipple and the skin of the breast was a ring consisting of longitudinal blisters, with purulent contents. Several days later bullæ filled with serous fluid appeared between the breasts and upon the sternum. In a few days all the bullæ dried up, leaving brown spots.—Lapowski.

Pityriasis Rosea. O. Lassar.. (*Ber. Klin. Wochen.*, 1903, p. 815.)

Lassar, who has expressed the opinion that leather worn next to the skin may produce lichen planus, and who believes that psoriasis may be caused by clothing, once more refers to what he thinks is the cause of pityriasis rosea. The manner in which the disease yields to baths and subsequent applications of tar or sulphur ointment suggests a saprophytic infection.

Almost without exception the disease appears in individuals who one week, two weeks or even a month previously have put on underwear which is new or which has been in storage for some time without washing it. An article which is new is not necessarily free from germs. Other factors participate in the production of the disease, otherwise it would be more common. Sweating (athletic shirts of oarsmen, bicyclists and golf players), mechanical friction, intertrigo and vigorous rubbing in baths aid in its production.

That new or stored undergarments cause the disease became clear to the author in the eighties when women of the better class began wearing tights. If the garment worn was a shirt the disease appeared where it fitted the body tightly, if drawers it began on the extremities. People must learn to wash cotton and woolen goods before wearing them.—H. G. Anthony.

Sarcoma Multiplex Pigmentosum Haemorrhagicum Idiopaticum, Further Contributions to the Pathology of the So-Called. Kaposi.. (Prof. Petrik's Laboratory, Budapest.) Josef Sellei (*Arch. f. Derm. u. Syph.*, LXVI, 1903, 40.)

A very interesting and very instructive controversial article concerning the question whether the so-called sarcoma multiplex pigmentosum idiopaticum (Kaposi), belongs to the group of sarcomata or to the infective granulomata.

The writer, upon the personal experience and knowledge gained in following up three cases, previously published, compares his observations with the findings of other writers, submitting the statements of his opponents to a thorough searching criticism.

He reaches the conclusion that his cases present a chronic inflammatory process, as they manifest the typical signs, which occur in infective granulation tumors, as fibroblasts, large number of plasma cells, leuco—and lymphocytes, mast cells and blood vessels. All these have in common this characteristic feature that histologically they do not in any stage present the typical and characteristic symptoms of sarcoma, and therefore they cannot be regarded from a pathohistological point of view as sarcomata.—Lapowski.

Syphilitic Anaemia, A Contribution to the Pathogenesis of and of Syphilitic Icterus. F. Samberger (Prof. Javnosky's Clinic, Prague.) (*Arch. f. Derm. u. Syph.*, LXVII, 1903, 89.)

The writer tries to answer the question, how can we classify the hæmolytic action of mercury in patients suffering with syphilis? The action of mercury is on one hand a specific action, so to say, an antiseptic against the syphilitic contagion; on the other hand hydrargyrum in syphilitic patients destroys in a great degree the erythrocytes. The blood producing organs answer to the destruction by an increased production and in time supply new blood cells in place of the destroyed ones. In its first stage syphilis not only affects the erythrocytes, but also influences the liver cells. When the deleterious action of syphilis upon the liver cells is a slight one, an alimentary glycosuria follows; if the action is more intense, in addition to the glycosuria urobilinuria will occur, and when the action is very intense or prolonged then icterus will appear. The action of syphilis upon the liver cells does not deprive them of the capacity of producing pigment; on the contrary it is produced in a larger quantity than in a healthy subject. But the cells of the liver lose their capacity of accumulating (and storing) the pigment, and it is diffused in the whole system. First the urobilin, as the easier diffusible material, and then the bilirubin. Thus the icterus in syphilis is a hepatogenetic icterus. The writer does not deny the possibility of other origin of icterus, but claims for his theory the same place in medicine as other theories enjoy. He cites a well observed case which goes to substantiate his conception of the causation of syphilitic icterus.—Lapowski.

Therapeutic Preparations, a Few Old and New. Dr. K. Hernheimer. *Transactions of the German Dermatological Society*, 1901.

For acute eczema a lotion composed of oxide of zinc and glycerine aa. 10, water 35, is commended. It cannct be used where there is much œdema, nor rapid spread of the disease, nor much exudation; nor on the penis and scrotum. Pieces of linen are wet with it and then laid on the part and confined with a bandage. It can be used as an excipient for tar and ichthyol in eczema; for chloral hydrate, tumenol, and stearate of zinc in pruritus; and for chrysarobin in psoriasis.

Ungt. carbonis detergens is composed of ammoniate of mercury, 1, liquor carbonis detergens, 20 drops, vaseline, 60, is useful in psoriasis, squamous eczema, and acne varioliformis.

Ungt. sesami salicylat is composed of salicylic acid, 1; spermaceti, 8; white wax, 7; oil of sesami, 57; rose water ad 100. To this may be added sulphur, tar and other drugs.

An ointment of the stearate of zinc is made by boiling together stearic acid, oxide of zinc, paraffine oil and lard. When cooled it forms a thick oil that is very useful as an anti-pruritic for all kinds of itching, and for chronic eczema. It penetrates readily into the skin, but not as readily as an ointment of the oleate of

zinc, which is prepared like that of the stearate. This also allays itching and is useful in eczema. It is an excellent excipient for mercury for inunctions. When used thus with 33 per cent. of mercury, it will cause the disappearance of syphilides in six to eight inunctions. It disappears from the surface of the skin in three minutes. Combined with 5 to 20 per cent. of iodine it does good service in syphilitic periostitis, tubercular syphilides, lymphangitis and epididymitis. Chrysarobin, pyrogallol, tar, ichthyol, sulphur and other drugs combine with it perfectly.—G. T. J.

Tumors (Benign) of the Skin, A Contribution to the Knowledge of. (Prof. Jadassohn's Clinic, Bern.) MAX WINKLER. (*Arch. f. Derm. u. Syph.*, LXVII, 1903, 1.)

This very interesting and elaborate article is not adapted for abstracting. Only a very brief résumé can be given. Basing his observations on five new cases observed in Jadassohn's Clinic and taking in consideration all other published cases, the writer suggests a new division and classification of benign tumors of the skin which have been described under various names. He divides them into two groups: 1. Multiple symmetrical nævi of the face, which have been described under the names of nævi sebacei (Darier), nævi sebacei et angiomatosi et sudoripari (Pringle), nævi fibro-angiomatosi (Darier), epithelioma adenoides cysticum disseminatum faciei et capillitii (Brooke, Fordyce, Balzer). 2. Isolated and generalized, nævi, described under the names of nævi sebacei, nævi sebacei et fibro-angiomatosi et sudoripari, and the isolated epitheliomata adenoides cystica (Trichoepithelioma). Jarisch White.—LAPOWSKI.

X-Ray Dermatitis, A General Febrile Affection with Exanthema in Combination with. GUIDO HOLZKNECHT. (*Arch. f. Derm. u. Syph.*, LXVI, 1903, p. 71.)

The writer calls attention to an occurrence which sometimes follows the application of Röntgen rays. It happens in one out of a hundred or even more cases, but as it may be mistaken for scarlet fever or septicæmia, it is well to have in mind the possibility of this occurrence. It is characterized by the appearance of a group of toxæmic symptoms during an intense X-ray reaction. There is a high temperature, sometimes reaching 39.5 degrees C., accompanied by only slight febrile general symptoms with or without an eruption. The prognosis is very favorable. The eruption appears in the form of a small, papular dermatitis, which may be partly confluent, giving the appearance of a red surface which fades away in several days, leaving some scales and disappears entirely in several weeks. —LAPOWSKI.

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